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Highlight

Abstract

This Article offers a new way to think about climate change. Two new climate change assessments--the 2018 Fourth National Climate Assessment ("NCA") and the United Nations Intergovernmental Panel on Climate Change's Special Report on Climate Change--prominently highlight climate change's multifaceted national security risks. Indeed, not only is climate change an environmental problem, it also accelerates existing national security threats, acting as both a "threat accelerant" and "catalyst for conflict." Further, climate change increases the intensity and frequency of extreme weather events while threatening nations' territorial integrity and sovereignty through rising sea levels. It causes both internal displacement within nations and climate change refugees across national borders. Addressing this new climate-security nexus brings together two historically distinct areas of law: environmental law and national security law. As we properly conceptualize climate change as a security threat, environmental law and national security law, once considered separate and often in conflict, engage with each other in new and complex ways.

The first body of law, environmental and climate change law, largely values the protection and preservation of the human environment via a cooperative federalism model of environmental laws and policies. The second body of law, national security law, largely suspends environmental protections *ex ante* via myriad national security exemptions within existing environmental statutes. But in the climate-security context, what was once in conflict is increasingly aligned as we look to preserve our common future from all threats, properly defined. If climate change is, indeed, correctly conceptualized as a security issue, how do these two bodies of law interact? Should a future President be afforded national security deference in addressing the threats posed by climate change? Is climate change potentially a national emergency? And if so, what actions can (or should) be taken?

This Article first describes and analyzes climate change as a national security issue, providing an overview of our understanding of climate change, climate science, and climate change's multifaceted security effects. Second, I analyze where environmental, climate change, and national security law increasingly intersect to include a discussion of relevant U.S. law. Finally, I use one specific example--whether climate change is a national emergency--as a vehicle to highlight how these two areas of law interact in new and surprising ways.

Text

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Introduction

*"The rise in sea levels associated with global warming has already harmed and will continue to harm Massachusetts. The risk of catastrophic harms, though remote, is nevertheless real."*¹

[*323] *"Our economy is on the line. Our future is on the line. Lives are on the line. So let's call this what it is, climate security, a life and death issue for our generation."*²

This Article offers a new way to think about climate change. In light of recent scientific studies³ and national security intelligence estimates,⁴ it is increasingly clear that climate change is not just an environmental issue--it is also a complex and multifaceted national security threat. In the face of the world's collective failure to date to implement policy or legal solutions to combat climate change, the world's leading scientists predict that the physical environment will transform in stunning ways.⁵ Today, the national security and intelligence communities in the United States and around the world are also sounding the alarm regarding climate change's national security impacts.⁶ But legal scholarship has yet to adequately address what I term the "climate-security connection" and has not wrestled with the normative outcomes for the increasingly overlapping fields of environmental and national security law.⁷ This Article fills this ever-widening gap in legal scholarship.

¹ Massachusetts v. EPA, 549 U.S. 497, 526 (2007).

² Pete Buttigieg's Campaign Speech, Annotated, N.Y. Times (Apr. 15, 2019), <https://perma.cc/B3QS-77BQ>.

³ See, e.g., U.S. Glob. Change Research Program, Fourth National Climate Assessment: Summary Findings (2018), <https://perma.cc/Q7AQ-AGNB> [hereinafter NCA 2018].

⁴ See, e.g., Daniel R. Coats, Office of the Dir. of Nat'l Intelligence ("ODNI"), Statement for the Record: Worldwide Threat Assessment of the U.S. Intelligence Community 21-23 (2019), <https://perma.cc/7BFG-N3CN> [hereinafter Intel Report].

⁵ See, e.g., Intergovernmental Panel on Climate Change ("IPCC"), Special Report: Global Warming of 1.5 [degrees] C (2018), <https://perma.cc/47ET-FU47> [hereinafter IPCC 1.5 Report]; see also David Wallace-Wells, The Uninhabitable Earth (2019) (summarizing the leading scientific evidence governing climate change; while Mr. Wallace-Wells is not a scientist, his book nevertheless does an outstanding job of describing the latest science and its corresponding impacts).

⁶ See Intel Report, *supra* note 4; see also Ctr. for Naval Analysis: National Security and the Threat of Climate Change (2007), <https://perma.cc/WSE6-GP6R> [hereinafter Climate Security 2007]; Katherine J. Mach, et al., *Climate as a Risk Factor for Armed Conflict*, 571 Nature 193 (2019); Matt McDonald, C. *Climate Change and Security: Towards Ecological Security?*, 10 Int'l Theory 153 (2018).

⁷ A rare and notable exception is Professor Sarah Light's outstanding and innovative scholarly work in this area. See, e.g., Sarah E. Light, *The Military-Environmental Complex*, 55 B.C. L. Rev. 879 (2014); Sarah E. Light, *Valuing National Security: Climate Change, the Military, and Society*, 61 UCLA L. Rev. 1772 (2014); see also Benjamin Heath, *The New National Security Challenge to the Economics Order*, 129 Yale L.J. 1020 (2020) (showcasing how governments worldwide have

And there is an upside to straightforwardly acknowledging climate change's national security threats. After all, despite climate inaction and rollbacks [*324] within the current Administration, we have seen some incremental progress on climate change in recent years in the national security sphere. For example, climate change legislation--aimed at protecting military installations through common-sense building standards--has been enacted.⁸ So there is a certain "stickiness" and durability when climate change is conceptualized as a security issue. To be sure, conceptualizing climate change as a national security issue is not without risk. But the failure to acknowledge--and act on--this climate-security connection in the face of consensus science and intelligence reports poses enormous national security costs.

Advances in climate science now forecast an uncertain future, increasingly defined by climate change's security impacts. Indeed, this past year may well have marked a turning point in our collective understanding of climate change's effects and threats. According to the 2018 NCA, global mean temperatures may rise as high as four degrees Celsius over pre-industrial norms by the end of this century.⁹ Climate change threatens national sovereignty and territorial integrity while increasing the frequency and intensity of extreme weather events.¹⁰ Within the United States, climate change will cause massive sea level rise, impacting coastal property rights and destabilizing long-held notions of property law.¹¹ The implications are catastrophic for both the physical environment and human security.

In addition, advances in climate attribution science now showcase climate change's impact on the frequency and intensity of extreme weather.¹² California [*325] wildfires recently killed eighty-five people, and Hurricanes Dorian, Florence, and Michael ravaged our coastlines. Internationally, we are seeing a clear connection between climate change and environmental degradation to include drought, famine, and food insecurity.¹³ Further, climate change acts as a "catalyst for conflict," undermining political stability--particularly in nations with weak governance structures that lack the capacity and resources to adapt.¹⁴ Further complicating matters, there are

adopted national security policies that address "an increasingly wide array of risks and vulnerabilities, including climate change").

⁸ See Shana Udvardy, *New Defense Bill Strengthens the Military's Flood Readiness and Saves Taxpayer Dollars--All While Addressing Climate Change*, Union of Concerned Scientists (Aug. 7, 2018), <https://perma.cc/P7VM-WVSP>.

⁹ U.S. Glob. Change Research Program, Fourth National Climate Assessment: Report-in-Brief 33 (2018), <https://perma.cc/XS93-P7KG> [hereinafter Fourth Assessment Report]. The latest report of the IPCC estimates that global warming is likely to reach 1.5 degrees Celsius above pre-industrial levels as early as 2030. In the past decade, the earth has witnessed the hottest mean temperatures in recorded human history, the opening of new sea-lanes in the Arctic, and an uptick in extreme weather events. See IPCC 1.5 Report, *supra* note 5, at SPM-4.

¹⁰ See, e.g., NCA 2018, *supra* note 3, at 36.

¹¹ See generally J. Peter Byrne, *A Fixed Rule for a Changing World: The Legacy of Lucas v. South Carolina Coastal Council*, 53 Real Prop. Tr. & Est. L.J. 1, 3 (2018) (discussing Justice Scalia's treatment of regulatory takings and how this is impacted by climate change); see also Cary Coglianese & Mark P. Nevitt, *Actually, the United States is Already Paying a Climate Tax*, Wash. Post (Jan. 23, 2019), <https://perma.cc/B9HT-XZ9J> (arguing that we are paying what amounts to a hidden and unfair carbon tax). The U.N. Human Rights Council recently ruled that governments cannot return people to countries where their lives might be threatened by climate change. See Yvonne Su, *U.N. Ruling on Climate Refugees Could be Gamechanger for Climate Action*, Climate Home News (Jan. 29, 2020), <https://perma.cc/KK6M-BSYU>.

¹² See Michael Burger, Jessica Wentz & Radley Horton, *The Law and Science of Climate Attribution*, 45 Colum. J. Envtl. L. 57 (2020); see also *Explaining Extreme Events of 2017 from a Climate Perspective*, 100 Am. Meteorological Soc'y, Supp. Jan. 2019, at S2, <https://perma.cc/29X8-W9LH> [hereinafter *AMS Report*] (finding that sixteen of seventeen extreme weather events were made more likely by human caused climate change); Sarah Kaplan & Angela Fritz, *Climate Change Was Behind 15 Weather Disasters in 2017*, Wash. Post. (Dec. 10, 2018), <https://perma.cc/5Q5M-9LM2>.

¹³ See, e.g., Christopher Flavelle, *Climate Change Threatens the World's Food Supply, United Nations Warns*, N.Y. Times (Aug. 8, 2019), <https://perma.cc/FDU2-G8BK>.

no special legal protections for climate change refugees, who disproportionately hail from Small Island Developing States ("SIDS") and developing nations most vulnerable to climate change.¹⁵

Yet in response to a series of climate-induced disasters and troubling scientific reports, the United States and the international community stepped backwards in terms of their carbon emissions reduction goals. Nations emitted more carbon emissions this past year than at any other year in human history--and that pace is only rising.¹⁶At the time of this writing, the world lacks a binding legal agreement that will put the world back on track to reduce its greenhouse gas ("GHG") emissions to below two degrees Celsius.¹⁷Even if all the Paris Climate Agreement commitments are met, the earth will continue to transform in dramatic ways.¹⁸Exacerbating matters, the current Administration has commenced the process of withdrawing from the Paris Agreement and has eliminated any mention of climate change from the most recent National Security Strategy.¹⁹Yet it is clear that we are reaching a tipping point for both the [*326] United States and the international community to take collective action to address climate change. Indeed, climate change is not just the most important environmental issue of our time--it may very well be the most important national security issue of our time.

The precise consequences of such a dramatic climatic change remain uncertain but will surely test existing legal authorities and how we conceptualize different areas of law. Specifically, it will force us to re-conceptualize environmental law's underlying relationship with national security.²⁰This is only the beginning of what I call the climate-security century, where climate change will stress, challenge, and destabilize existing legal frameworks.

¹⁴ For example, Syria experienced a massive drought exacerbated by climate change, leading to internal displacement, civil war, and a massively disruptive refugee crisis. Discounting climate change's impact to the Syrian operational environment would have negative consequences on the military's ability to respond.

¹⁵ See, e.g., Alexander Gillespie, *Small Island States in the Face of Climatic Change: The End of the Line in International Environmental Responsibility*, 22 UCLA J. Envtl. L. & Pol'y 107 (2004).

¹⁶ Brady Dennis & Chris Mooney, *Global Greenhouse Gas Emissions Will Hit Another Record This Year, Experts Project*, Wash. Post (Dec. 3, 2019), <https://perma.cc/ZAW7-6UBY>.

¹⁷ For example, there is no comprehensive climate change legislation in the United States, and the Paris Climate Agreement relies upon a process-driven reporting system. The United States is in the process of withdrawing from the Paris Climate Agreement at this time. This withdrawal will not be complete until November 4, 2020, one day following the 2020 presidential election.

¹⁸ See, e.g., Wallace-Wells, *supra* note 5.

¹⁹ See Press Statement, Sec'y Michael Pompeo, U.S. State Dep't, On the U.S. Withdrawal from the Paris Agreement (Nov. 4, 2019), <https://perma.cc/D2R7-52M9>; see also The White House, National Security Strategy of the United States of America (2017), <https://perma.cc/86TV-DSXM> (President Donald J. Trump). The 2017 National Security Strategy omits any reference to climate change. The current President has previously dismissed climate change as a mere hoax: "The concept of global warming was created by and for the Chinese in order to make U.S. manufacturing non-competitive." Donald Trump (@realDonaldTrump), Twitter (Nov. 6, 2012, 11:15am), <https://perma.cc/2QPD-SSMW>. It wasn't always this way. In 1991, then-President Bush assessed that climate change "respects no international boundaries" and contributes to political conflict in his 1991 National Security Strategy. See The White House, National Security Strategy of the United States of America 22 (1991), <https://perma.cc/3AF9-GUAE> (President George H.W. Bush). Since 1991 until recently, climate change has been consistently mentioned in national security policy guidance.

²⁰ Cf. Jedidiah Purdy, *Climate Change and the Limits of the Possible* (Duke Law Sch. Pub. Law & Legal Theory Paper No. 217; Duke Sci., Tech. & Innovation Paper No. 28) (2008), <https://perma.cc/B5BP-6JKM> ("Climate change looks to be more than just another environmental problem. It threatens to test the limits of our dominant ways of understanding and solving, not just environmental problems, but problems of political economy generally.").

²¹Indeed, the national security and intelligence communities are now in direct conversation with climate science, in some cases integrating the scientific reports into intelligence analysis. ²²

As we conceptualize climate change as a massively destabilizing security threat, two different bodies of law--historically distinct and often in conflict--engage and interact with each other in novel ways. The first body of law, environmental law and the emerging field of climate change law, largely seek to protect and preserve the human environment via a cooperative federalism model of environmental laws and policies. But is climate change its own field in law? And is climate change law nested within environmental law or is it even more complex? ²³The second body of law--national security and the related [*327] field of emergency law--suspends environmental protections in the event of a national emergency declaration or national security determination. ²⁴For example, the Clean Air Act ("CAA"), the major U.S. federal environmental law that regulates carbon dioxide and other GHG emissions, ²⁵authorizes the President to exempt emissions from stationary sources if "it is in the national security interests of the United States to do so." ²⁶But what if excessive GHG emissions cause the underlying national security threat? Climate change demands *greater* environmental protections to reduce GHG emissions, regardless of source. ²⁷In the absence of comprehensive climate legislation, what authorities are in place to address the threats posed by the climate-security connection?

This Article addresses these questions and others, proceeding in four parts. In Part I, I first describe, analyze, and contextualize climate change as a national security issue. This includes a descriptive overview of the latest climate change science, intelligence, and security reports. In Part II, I analyze where environmental, climate change, and national security law increasingly interact to include a discussion of relevant U.S. law. This includes existing environmental statutes, and recent climate change litigation. In Part III, I use one specific example--addressing whether climate change is a national emergency--as a vehicle to highlight how these two areas of law interact. Part IV addresses both the risks and opportunities in conceptualizing climate change as a national security issue. This Part addresses how the national security bureaucracy can serve as a powerful information broker and norm entrepreneur that can potentially drive resources, influence public perception, collective behavior, and action. ²⁸The Article concludes by shining light on values that, I argue, operate below the surface of both environmental

²¹ Mark P. Nevitt, *Climate Change: Our Greatest National Security Threat?*, Just Security (Apr. 18, 2019), <https://perma.cc/CR83-QQ3M>.

²² See Office of the Dir. of Nat'l Intelligence, National Intelligence Estimate: Implications for US National Security of Anticipated Climate Change (2016), <https://perma.cc/U36Q-ECU2> (integrating aspects of the IPCC's Report into the intelligence report).

²³ See, e.g., Frank H. Easterbrook, *Cyberspace and the Law of the Horse*, 1996 U. Chi. Legal F. 207, 207-16; Lawrence Lessig, *The Law of the Horse: What Cyberlaw Might Teach*, 113 Harv. L. Rev. 501 (1999); J.B. Ruhl & James Salzman, *Climate Change Meets the Law of the Horse*, 62 Duke L.J. 975, 988-89 (2013) (describing the usefulness of different fields of law). For more information, see *infra* note 64.

²⁴ National Emergencies Act of 1976, 50 U.S.C. §§1601-1651 (2018); cf. Jules Lobel, *Emergency Power and the Decline of Liberalism*, 98 Yale L.J. 1385 (1989).

²⁵ Clean Air Amendments of 1970, 42 U.S.C. § 7411 (2018).

²⁶ *Id.* § 7412(i)(4).

²⁷ The national security community is an enormous emitter of GHGs. Consider the emissions produced by the U.S. military. If the U.S. Department of Defense was ranked against all the nations of the world, it would be the fifty-fifth largest emitter. Neta C. Crawford, Brown Univ. Watson Inst. for Int'l & Pub. Affairs, Pentagon Fuel Use, Climate Change, and the Costs of War 2 (Nov. 2019), <https://perma.cc/ZR3X-WQHL> [hereinafter *Costs of War*].

²⁸ See Ann E. Carlson, *Recycling Norms*, 89 Calif. L. Rev. 1231, 1257-58 (2001) (describing how governmental efforts in World War II to encourage recycling for patriotic reasons were largely embraced by the American public); Rebecca Ingber, *Bureaucratic Resistance and the National Security State*, 104 Iowa L. Rev. 139, 168 (2018).

and national security law, and that should be drawn on to bridge the gap and bring the two fields into dynamic conversation.

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I. Climate Change: A Non-Traditional and Emerging National Security Threat

Environmental law and national security law have historically been treated as two different areas of law and, with a few notable exceptions, have rarely been in direct conversation with one another.²⁹No longer. In what follows, I describe how climate science and the rise of climate intelligence--informed by national security professionals--adds to our understanding of climate change's multifaceted impacts.³⁰This Part describes the current state of climate science and the increasingly important role that the national security and intelligence communities play in the ongoing debate about the current and future national security risks of climate change. Due to recent advances in climate attribution science, a much clearer link has emerged between human activity, climate change, and extreme weather patterns.³¹While the executive branch has discussed climate change's security impacts in national security guidance for nearly twenty years, the climate-security connection has calcified in recent years.³²There is a continual and evolving conversation between the scientific and intelligence communities centered on climate change's risks. In what follows, I first discuss how climate science has brought its national security effects into greater relief. Specifically, sea level rise, storm surge, and extreme weather--all exacerbated by climate change--threaten our territorial integrity and national sovereignty in dramatic and fundamental ways. Second, I address how climate science has energized and primed the national security community to double down on activity in which it is already engaged.

A. Climate Science and the Emerging Climate-Security Nexus

Climate change is aptly described by Professor Richard Lazarus as an all-encompassing and complex "super-wicked" problem.³³Today's scientific consensus [*329] makes clear that climate change is "extremely likely to be caused by" human activity.³⁴As discussed below, the IPCC's most recent Special Report and the NCA

²⁹ The relationship between environmental law and national security law has always been somewhat fraught as the military has sought national security exemptions via existing environmental statutes and through exemptions within the Administrative Procedure Act ("APA"). See, e.g., *Winter v. Nat. Res. Def. Council* ("NRDC"), 555 U.S. 7 (2008) (upholding military exemptions within environmental law).

³⁰ Climate science makes clear that we will need to massively reduce GHG emissions from all sources, and we will need a massive, scalable energy transformation to secure a more livable future. IPCC, IPCC Fifth Assessment Report, Climate Change: 2014 (Summary for Policymakers), <https://perma.cc/4V4G-NNY7> [hereinafter Fifth Assessment Report]; see also IPCC 1.5 Report, *supra* note 5.

³¹ See *AMS Report*, *supra* note 12 (finding that fifteen of sixteen extreme weather events were made more likely by human-caused climate change).

³² The White House, National Security Strategy of the United States of America (2002), <https://perma.cc/U8TC-8QMG> (President George W. Bush).

³³ Richard Lazarus, *Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future*, 94 Cornell L. Rev. 1153, 1159-87 (2009). In this highly influential paper, Professor Lazarus of Harvard Law School outlines climate change legislation's complex, "super-wicked" problems, highlighting the numerous challenges to addressing climate change.

³⁴ The IPCC's Fifth Assessment Report explains that: Anthropogenic greenhouse gas emissions have increased since the pre-industrial era, driven largely by economic and population growth, and are now higher than ever. This has led to atmospheric concentrations of carbon dioxide, methane and nitrous oxide that are unprecedented in at least the last 800,000 years. Their effects, together with those of other anthropogenic drivers, have been detected throughout the climate system and are *extremely likely* to have been the dominant cause of the observed warming since the mid-20th century. Fifth Assessment Report, *supra* note 30, at 4.

reaffirm what our unhealthy planet already knows--the earth is warming at a faster rate than previously estimated, climate change impacts global security in new and complex ways, and the window to solve this climate security crisis is rapidly closing.³⁵ Both reports showcase climate change's unmistakable, debilitating effects on global security, while simultaneously highlighting that the window to reduce worldwide GHG emissions is shutting.

1. IPCC Special Report (2018)

In 2014, the IPCC issued its Fifth Assessment Report, highlighting climate change impacts on food security and human security.³⁶ In October 2018, the IPCC issued a Special Report on the impacts of a 1.5 degrees Celsius increase in temperature above pre-industrial levels.³⁷ In this Special Report, international climate scientists determined that global temperatures are likely to increase 1.5 degrees Celsius above pre-industrial levels as early as 2030. The Report also warned that the window to take action to keep global temperatures [*330] from surpassing this threshold is rapidly closing and that we will easily surpass this threshold without a dramatic reduction in GHG emissions.³⁸

There must be a massive worldwide reduction in GHG emissions in order to limit global warming to below 1.5 degrees Celsius from baseline pre-industrial levels.³⁹ This conclusion is aligned with the Paris Climate Agreement's goal of holding global average temperature below two degrees Celsius above pre-industrial levels while "pursuing efforts to limit the temperature increase to 1.5 degrees above pre-industrial levels."⁴⁰ Scientists estimate that warming at or above two degrees Celsius beyond pre-industrial levels will cause significant economic and environmental damage. Domestically, wildfires will burn at least twice as much forest area in the western United States than was typically burned by wildfires preceding 2019.⁴¹

³⁵ IPCC 1.5 Report, *supra*note 5.

³⁶ The IPCC recently reaffirmed the scientific consensus on climate change, emphasizing the need for immediate international action. *Id.* In August 2019, the IPCC issued a new Special Report stating that "climate change, including increases in frequency and intensity of extremes, has adversely impacted food security and terrestrial ecosystems as well as contributed to desertification and land degradation in many regions (*high confidence*)." P.R. Shukla et al., *IPCC, 2019: Summary for Policymakers*, in *Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems* (2019), <https://perma.cc/PV7X-VPDG>.

³⁷ IPCC 1.5 Report, *supra*note 5. The report was issued with the aim of "strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty." *Id.* at vii. The next comprehensive IPCC report, the Sixth Assessment Report, is scheduled to be issued in 2022.

³⁸ The report places a level of confidence in each finding as well as the assessed likelihood of an outcome or result. *Id.* at 4. For example, "virtually certain" indicates a 99-100% probability of an outcome occurring, "very likely" indicates a 90-100% probability, and "likely" indicates a 66-100% outcome. *Id.*

³⁹ This change will require global reductions in greenhouse gas emissions from human sources of 40-60% from 2010 levels by 2030 and net-zero emissions by 2050. *Id.* at 12.

⁴⁰ Paris Agreement to the United Nations Framework Convention on Climate Change art. 2, Dec. 12, 2015, T.I.A.S. No. 16-1104.

⁴¹ See Green New Deal Resolution, H.R. Res. 109, 116th Cong., P 3(A)-(F) (2019). The report also notes that at or above two degrees Celsius beyond pre-industrialized levels, the earth will lose 99% of all coral reefs, more than 350,000 people will be exposed to heat stress by 2050, and the United States risks damage of \$ 1 trillion dollars in public infrastructure and coastal real estate. The Green New Deal Resolution refers to "frontline and vulnerable communities" that will be particularly vulnerable to these effects. *Id.*

The 2018 IPCC Special Report stated that absent a dramatic reduction in GHG emissions--in the vicinity of 40-70%⁴²-- the world is well on track to surpass both the 1.5 degree Celsius and 2.0 degree Celsius thresholds.⁴³ Indeed, it is increasingly likely that the governing United Nations Framework Convention on Climate Change and international legal instruments will fall far short of what is needed to keep the temperature increase at manageable levels. Sea levels will rise throughout this century and will continue well past 2100 (when many of the climate models inexplicably stop). Significantly, the IPCC Special Report reinforces that climate change impacts national security: "Climate-related [*331] risks to health, livelihoods, food security, water supply, human security, and economic growth are projected to increase with global warming of 1.5 degrees Celsius and increase further with 2.0 degrees Celsius."⁴⁴

The IPCC Special Report also found that disadvantaged and vulnerable populations are at higher risk of experiencing climate change's adverse consequences, which will disproportionately impact SIDS and developing countries.⁴⁵ Finally, in the unlikely event that the two degrees Celsius goal is met, climate change will continue to intensify extreme weather and undermine national security. After all, GHG emissions stay in the atmosphere for decades after they are emitted.

2. The Fourth National Climate Assessment: Emphasizing Climate Change's National Security Impacts (2018)

In November 2018, the U.S. government released the NCA, addressing climate change impacts and risks, with a focus on climate change's impacts in the United States.⁴⁶ In 1990, President George H.W. Bush signed a law requiring that the U.S. Global Change Research Program ("USGCRP") deliver the National Climate Assessment to Congress and the President "not less frequently than every 4 years."⁴⁷ This report must "analyze[] the effects of global change on the natural environment" and "[the] current trends in global change, both human-induced and natural, and projects major trends for the subsequent 25 to 100 years."⁴⁸ Once again, the scientific community is sounding the alarm on climate change's national security impacts. Specifically, the NCA states: "Climate change, variability, and extreme events, in conjunction with other factors, can exacerbate conflict, which has implications for U.S. national security. Climate impacts already affect U.S. military infrastructure, and the U.S. military is incorporating climate risks in its planning."⁴⁹

National security is mentioned fourteen times in the NCA's Report in Brief.⁵⁰ Furthermore, the NCA added an entirely new chapter addressing national [*332] security, U.S. humanitarian assistance, and disaster relief--

⁴² See Intergovernmental Panel on Climate Change, *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II, and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* 20 (R.K. Pachauri & L.A. Meyer eds., 2015), <https://perma.cc/PQ4W-JQ56>; see also Kirsten Davies & Thomas Ridell, *The Warming War: How Climate Change Is Creating Threats to International Peace and Security*, 30 Geo. Envtl. L. Rev. 47, 51 (2017).

⁴³ See *Each Country's Share of CO₂ Emissions*, Union of Concerned Scientists, <https://perma.cc/56HJ-M589>. Of note, the United States is currently the world's second-largest GHG emitter (behind China) and has emitted 20% of total global GHG emissions into the atmosphere through 2015.*Id.*

⁴⁴ IPCC 1.5 Report, *supra* note 5, at 9.

⁴⁵ *Id.*

⁴⁶ NCA 2018, *supra* note 3.

⁴⁷ Global Change Research Act of 1990, Pub. L. No. 101-606, 104 Stat. 3096 (1990).

⁴⁸ *Id.*

⁴⁹ NCA 2018, *supra* note 3, at 605.

⁵⁰ Fourth Assessment Report, *supra* note 9. The NCA states that: Natural variability and changes in climate increase risks to our national security by affecting factors that can exacerbate conflict and displacement outside of U.S. borders,

issues that were absent from the Third National Climate Assessment. ⁵¹The NCA further highlights climate change's "interconnected impacts," noting that extreme weather and climate-related impacts on one system can result in increased risk and failures in other systems, including water resources, food production, public health, and national security. ⁵²It states:

Climate change, variability, and extreme events increase risks to national security through direct impacts on U.S. military infrastructure and, more broadly, through the relationship between climate-related stress on societies and conflict. Direct linkages between climate and conflict are unclear, but climate variability has been shown to affect conflict through intermediate processes, including resource competition, commodity price shocks, and food insecurity. ⁵³

These interconnected impacts are both transnational and trans-substantive. As climate change exacerbates food and water insecurity both inside and outside U.S. borders, there exists an increased threat of conflict and displacement that places stress on migrants fleeing food insecurity, drought, and related environmental stressors. ⁵⁴Climate change can also lead to commodity price shocks, increase the risk of infectious diseases, and exacerbate resource competition. ⁵⁵

Both the IPCC report and the NCA showcase how climate change increases the intensity and likelihood of extreme weather events. Indeed, advances in climate attribution science demonstrate that the threats posed by climate change increase the likelihood of natural disasters. ⁵⁶Recently, the American Geophysical Union reported that human-caused climate change increased both the likelihood and severity of fifteen of sixteen extreme weather events in [*333] 2017. ⁵⁷As climate scientists refine their models, we will likely be able to predict with greater certainty the future likelihood of extreme weather events and better pinpoint their size and location.

In addition, climate change's financial costs are staggering--and only rising. The Office of Management and Budget ("OMB") recently estimated that the federal government spent over \$ 300 billion in direct costs alone to address extreme weather events and fires in the past decade. ⁵⁸Between 1980 and 2013, the United States suffered over \$ 260 billion in flood damage. ⁵⁹According to one leading insurance firm, natural disasters cost

such as food and water insecurity and commodity price shocks. More directly, our national security is impacted by damage to U.S. military assets such as roads, runways, and waterfront infrastructure from extreme weather and climate-related events. NCA 2018, *supra*note 3, at 59. Contrast this report with the country's most recent National Defense Strategy and National Security Strategy, which eliminated any mention of climate change from these important policy documents. U.S. Dep't of Defense, Summary of the National Defense Strategy of the United States of America (2018), <https://perma.cc/PP3S-32UU>; The White House, National Security Strategy of the United States of America (2017), <https://perma.cc/7JUV-7GQ3> (President Donald J. Trump).

⁵¹ NCA 2018, *supra*note 3, at 604-37. This chapter is titled "Climate Effects on U.S. International Interests."

⁵² *Id.* at 26.

⁵³ *Id.* at 606.

⁵⁴ For example, Guatemala recently suffered a severe drought and food shortage. *See, e.g.,* Gena Steffens, *Changing Climate Forces Desperate Guatemalans to Migrate*, Nat'l Geographic (Oct. 23, 2018), <https://perma.cc/E7LK-XHHY>.

⁵⁵ NCA 2018, *supra*note 3, at 540, 606.

⁵⁶ *See, e.g.,* AMS Report, *supra*note 12.

⁵⁷ *See id.*; Sarah Kaplan & Angela Fritz, *Climate Change Was Behind 15 Weather Disasters in 2017*, Wash. Post (Dec. 10, 2018), <https://perma.cc/MV68-D96H>.

⁵⁸ U.S. Government Accountability Office, Climate Information (2015), <https://perma.cc/748N-U7QW> (citing OMB's estimates in the President's 2016 budget proposal).

the world an average of \$ 184 billion per year and 106,000 lives.⁶⁰ In turn, climate-driven weather events threaten the infrastructure at U.S. military bases and harm military readiness, discussed in greater detail below.⁶¹ Finally, independent of the NCA and the IPCC reports, GHG emissions have actually been increasing--following a decrease in GHG emissions in the aftermath of the 2008 recession, they are once again on the rise.⁶²

The IPCC Special Report and NCA scientific reports have caught the eye of a more mainstream publishing audience. At two degrees Celsius above pre-industrial levels--which we are on track to surpass--author David Wallace-Wells foreshadows the world that we may well inhabit by 2050 in *The Uninhabitable Earth*:

As temperatures rise, this could mean many of the biggest cities in the Middle East and South Asia would become lethally hot in summer, perhaps as soon as 2050. There would be ice-free summers in the Arctic and the unstoppable disintegration of the West Antarctic's ice sheet, which some scientists believe has already begun, threatening the world's coastal cities with inundation. Coral reefs would mostly disappear. And there would be tens of millions of climate refugees, perhaps many more, fleeing droughts, flooding and extreme [*334] heat, and the possibility of multiple climate-driven natural disasters striking simultaneously.⁶³

In sum, both the NCA and the IPCC report clarify that nations must wrestle with climate change's complex and multifaceted security impacts. The scientific consensus demonstrates that time is of the essence to reduce our collective GHG emissions and prepare for the climate-security century. In the next section, I describe how the national security and intelligence communities are now increasingly in conversation with climate science. Indeed, the national security and intelligence communities bring a risk-based, sober-minded, and apolitical approach to the threats facing the nation and world--however defined. And they make clear that failure to act on climate today in the face of overwhelming scientific consensus comes at an extraordinarily high cost.

B. National Security & Intelligence Communities: Increasingly in Conversation with Climate Scientists

Just as climate scientists have increasingly articulated the future threats and risks posed by climate change, national security professionals have increasingly integrated the best available science into their intelligence reports, policy pronouncements, and governing analysis. There is now a continuous, two-way conversation between the scientific and security communities as the national security and intelligence communities continually sound the alarm on climate change's multifaceted national security threats.⁶⁴ Today, the Central Intelligence Agency

⁵⁹ Alice Hill, *Threat Multiplier: Exploring the National Security Law and Policy Implications of Climate Change*, 28 Geo. Envtl. L. Rev. Online 1, 8-9 (2015) (internal citation omitted).

⁶⁰ *Id.* at 4. Pacific Gas & Electric recently declared bankruptcy in the face of massive California wildfires, with at least some commentators speculating that this was the U.S. economy's first "climate bankruptcy." Seelan Gray & Gretchen Bakkxe, *Pacific Gas and Electric Is a Company that Was Just Bankrupted by Climate Change. It Won't Be the Last*, Wash. Post (Jan 30, 2019), <https://perma.cc/XC6K-RDM4>.

⁶¹ Mark P. Nevitt, *Pentagon's Climate Change Report Lacks Analysis Law Requires*, Just Security (Jan. 23, 2019), <https://perma.cc/W678-9Z66>.

⁶² See, e.g., Brady Dennis & Chris Mooney, *We Are in Trouble: Global Carbon Emissions Reached a Record High in 2018*, Wash. Post (Dec. 5, 2018), <https://perma.cc/82L2-P8F5>.

⁶³ Wallace-Wells, *supra*note 5, at 10.

⁶⁴ See Bishop Garrison, *The President's Constitutional Responsibility to Confront Climate Change and Invest in Renewable Energy for National Security*, 45 Hast. Const. L.Q. 671, 672 (2018) (asserting that the Commander-in-Chief Clause places an affirmative duty on the President to combat climate change as the "decision-maker for all final military actions"). I do not take a position on whether this emerging "climate security" field is distinct or a "Law of the Horse," but I argue that it is a vastly undertheorized field that is deserving of more attention for several reasons. Despite these earlier pronouncements from the President, Department of Defense ("DoD") scientists, and the intelligence community, the threats posed by climate change were omitted as a national security threat in the latest National Security Strategy ("NSS") and National Defense Strategy. As

("CIA"), national security, and broader intelligence communities actively engage with the latest climate science.⁶⁵ Further, with one recent, notable [*335] exception, climate change has been mentioned in every presidential National Security Strategy since 1991.⁶⁶

As discussed below, this rise in climate security and climate intelligence has the potential to drive national strategy, operations, public perceptions, and existing resources.⁶⁷ While the current Administration's EPA is actively dismantling domestic environmental and climate regulations, climate security remains "sticky" and durable, keeping climate change in the public and congressional eye.⁶⁸ Even under the current Administration, which has rolled back previous climate initiatives, new climate legislation has been recently enacted through the national security appropriations process. For example, the 2018 National Defense Authorization Act prohibited military construction in the 100-year floodplain--an important climate adaptation measure that passed a Republican-controlled Congress and was signed by President Trump.⁶⁹ The 2018 defense spending bill required the Department of Defense ("DoD") to provide a report ranking the military installations most vulnerable to climate change.⁷⁰ This year, Congress has held multiple congressional hearings from scientists and experts to better understand the national security risks posed by climate change.⁷¹

[*336] Consider, too, how the intelligence communities have recently and steadily warned of the threats posed by climate change. In 2008, the George W. Bush Administration produced a National Intelligence Estimate ("NIE"), which first addressed the effects of climate change on national security. In 2010, the Director of National Intelligence stated: "We continue to assess that global climate change will have wide-ranging implications for U.S. national security interests over the next 20 years because it will aggravate existing world problems--such as

referenced earlier, it was not always this way. In 1991, then-President George H.W. Bush assessed that climate change "respects no international boundaries" and contributes to political conflict in his 1991 NSS. See The White House, *supra* note 19, at 22.

⁶⁵ William J. Broad, *CIA Is Sharing Data with Climate Scientists*, N.Y. Times (Jan. 4, 2010), <https://perma.cc/H44H-RYTY>.

⁶⁶ Climate change was not directly addressed in the 2017 National Security Strategy issued by President Trump. As far back as 1990, the military has addressed the security implications of global climate change. See Terry Kelly, *Global Climate Change, Implications for the United States Navy* (U.S. Naval War Coll., 1990) (on file with author).

⁶⁷ Intelligence is defined as the "product resulting from the collection, processing, integration, evaluation, analysis, and interpretation of available information concerning foreign nations, hostile or potentially hostile forces or elements, or areas of actual or potential operations." U.S. Dep't of Def., Joint Publication 1-02, Department of Defense Dictionary of Military and Associated Terms 114 (2010) [hereinafter DoD Dictionary]; Stephen Dycus et al., National Security Law 489 (2016) ("One role of the intelligence community is the collection, analysis, and dissemination of information about threats to national security.").

⁶⁸ Recent national defense authorization acts signed by President Trump have addressed climate change measures at military installations. The pending Intelligence Authorization Act before Congress has a provision establishing a new "Climate Security Fusion Center." H.R. 3494, 116th Cong. (2019).

⁶⁹ Shana Udvardy, *New Defense Bill Strengthens the Militaries Flood & Energy Readiness and Saves Taxpayer Dollars--All While Addressing Climate Change*, Union of Concerned Scientists (Aug. 7, 2018), <https://perma.cc/2Q9V-UJNZ>.

⁷⁰ National Defense Authorization Act of 2018, Pub. L. No. 115-91, § 335, 131 Stat. 1283, 1357 (2017) (Langevin Amendment). For a critique of the report, see Mark P. Nevitt, *Pentagon Climate Change Reports Lacks Analysis Report Requires*, Just Security (Jan. 23, 2019), <https://perma.cc/3T7H-MCRJ>.

⁷¹ *National Security Implications of Global Climate Change: Joint Hearing Before the Select Committee on Energy Independence and Global Warming and Subcommittee on Intelligence, Community Management, Permanent Select Committee on Intelligence House of Representatives*, 110th Cong. 14 (2008) (statement of Thomas Fingar, Deputy Dir. of Nat'l Intelligence for Analysis & Chairman of the Nat'l Intelligence Council) (noting that climate change "will have wide-ranging implications for U.S. national security interests over the next 20 years").

poverty, social tensions, environmental degradation, ineffectual leadership, and weak political institutions--that threaten state stability."⁷²

In 2015, President Obama signed the federal Climate Action Plan, requiring federal agencies to report on climate change's impacts and directing DoD to assess the vulnerability of its coastal facilities.⁷³ This was followed up by a 2016 NIE that incorporated the findings from the IPCC Fifth Assessment into its report, highlighting projected trends in extreme weather events that are exacerbated by climate change.⁷⁴ The 2016 NIE outlined six wide-ranging national security challenges ("possible pathways") for the United States and other countries over the next twenty years: (1) threats to the stability of countries; (2) heightened social and political tension; (3) adverse effects on food prices and availability; (4) increased risks to human health; (5) negative impacts of investments and economic competitiveness; and (6) potential climate discontinuities and "secondary surprises."⁷⁵

In 2019, the ODNI issued a new threat assessment report, stating that the "negative effects of environmental degradation and climate change" will impact human security, threaten public health, and lead to historic levels of human displacement within and across borders.⁷⁶ It further noted:

Global environmental and ecological degradation, as well as climate change, are likely to fuel competition for resources, economic distress, and social discontent through 2019 and beyond. Climate hazards such as extreme weather, higher temperatures, droughts, floods, wildfires, storms, sea level rise, soil degradation, and acidifying oceans are [*337] intensifying, threatening infrastructure, health, and water and food security.⁷⁷

In sum, the national security and intelligence communities, which have historically focused on traditional security threats such as aggression and inter-state conflict, now address non-traditional security threats such as environmental security and climate change.⁷⁸ This literature must be read in conjunction with the NCA, IPCC reports, and related scientific reports. While national security and intelligence reports are not immune to criticism, they have remained fairly durable and are somewhat (but not entirely) protected from the politicization of climate science.⁷⁹ After all, the military enjoys a comparably high approval rating among the American public, especially when compared to Congress. As discussed below, the national security and intelligence communities can serve as powerful validators of the most pressing security threats facing the nation and the world.⁸⁰ But

⁷² Dennis C. Blair, ODNI, Annual Threat Assessment of the U.S. Intelligence Community for the Senate Select Committee on Intelligence (2010), <https://perma.cc/9FAS-MZNP>.

⁷³ Exec. Office of the President, The President's Climate Action Plan (2013), <https://perma.cc/CMC6-92K3>.

⁷⁴ As discussed in Section I.A, *supra*, the IPCC recently reaffirmed the scientific consensus on climate change, emphasizing the need for immediate international action.

⁷⁵ Nat'l Intelligence Council, NIC WP 2016-01, Implications for U.S. National Security of Anticipated Climate Change 6-11 (2016), <https://perma.cc/EB9R-74J2>.

⁷⁶ Coats, *supra*note 4, at 21.

⁷⁷ *Id.* at 23.

⁷⁸ For a discussion of what is meant by national security and its evolving definition, see Sanford E. Gaines, *Sustainable Development and National Security*, 30 Wm. & Mary Envtl. L. & Pol'y Rev. 321, 345-52 (2006).

⁷⁹ Following the release of the 2019 National Intelligence Threat Assessment, there were efforts made by the Trump Administration to block reports on climate change and national security by governmental experts. See Rod Schoonover, *The White House Blocked My Report on Climate Change and National Security*, N.Y. Times (Aug. 2, 2019), <https://perma.cc/PF97-R5G9>.

⁸⁰ Since intelligence reports are necessarily produced by individual countries, there is no international intelligence report equivalent to the IPCC. The North American Treaty Organization ("NATO"), however, has routinely highlighted the importance of environmental security matters, including climate change. See generally Tyler H. Lippert, NATO, Climate Change, and

having climate and environmental advocates embrace the securitization of climate change comes with its own risk. To start, national security is such a broadly defined term that it can be wielded in a manner that may undermine the underlying goal to minimize GHG emissions. For example, in 2018, Secretary of Energy Rick Perry argued that national security required the continual operation of coal-fired power plants.⁸¹ Even though this recommendation went directly against most climate scientists' views, Perry relied on the capacious nature of national security in implementing this idea. Applying a national security framework tethered to more traditional conceptions of national security, as Perry did, comes with its own risks because ignoring climate change's long-term effects in the hopes of achieving some perceived short-term economic gain will only serve to further endanger national security. Thus, because national security is so malleable, it is essential to think [*338] of principled ways to interpret it in the climate space. The next Part of this Article turns to that work.

II. Environmental Law, Climate Change, and National Security Values

National security law came into focus following the Second World War, centering on traditional national security threats. Environmental law emerged in earnest later, during the 1960s and 70s. As environmental law wrestled with climate change's environmental harms, it remained focused on climate mitigation measures and the reduction of GHG emissions both domestically and internationally. Concurrently, national security law expanded to address non-traditional security threats to include environmental security matters, natural resource constraints, and environmental harms. Most recently, environmental law and the emerging field of climate change law have addressed land use, climate adaptation, and natural disaster law as our understanding of climate change's impacts have become more pronounced. As climate science and climate attribution science have advanced, national security law has evolved beyond matters of environmental security to specifically address climate-security, which threatens national security infrastructure and serves as a "catalyst for conflict" overseas. As we reconcile with the security impacts of the climate-security century, we must fundamentally reconsider the relationship between these two areas of law.

In what follows, I first address the historical relationship and origin stories of environmental law and national security law. Next, I address how the climate-security connection reflects a maturation and convergence of environmental and national security law.

A. Environmental Law and Climate Change's Values

Within the United States, the CAA currently forms the statutory basis for the regulation of GHG emissions. In *Massachusetts v. EPA*,⁸² the Supreme Court held that the CAA authorizes EPA to regulate GHG emissions in the event that it forms a "judgment" that such emissions contribute to climate change and that the State of Massachusetts had standing to challenge the agency's failure to do so.⁸³ Following *Massachusetts v. EPA*, EPA issued an endangerment finding and later took steps to regulate GHG emissions.⁸⁴

International Security: A Risk Governance Approach (2016). SeeLight, *Valuing National Security*, *supra* note 7, at 1788-89.

⁸¹ Eric Wolff & Darius Dixon, *Rick Perry's Coal Rescue Runs Aground at White House*, Politico (Oct. 15, 2018), <https://perma.cc/FM58-M4QL>.

⁸² 549 U.S. 497 (2007).

⁸³ *Id.*

⁸⁴ See *Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act*, EPA, <https://perma.cc/MCY7-5ZNL> [hereinafter *Endangerment Finding*]. Shortly thereafter, the Obama Administration released the Clean Power Plan, the central regulatory action for addressing climate change. This effort was stalled by the Supreme Court in 2015, see *West Virginia v. EPA*, 136 S. Ct. 1000 (2016) (order granting stay), and the Trump Administration recently repealed the Clean Power Plan, Repeal of the Clean Power Plan; Emission Guidelines for Greenhouse Gas Emissions From Existing Electric Utility Generating Units; Revisions to Emission Guidelines Implementing Regulations, 84 Fed. Reg. 32,520 (July 8, 2019) (to be codified at 40 C.F.R. §§60.20a-60.29a, 60.5700a-60.5805a).

[*339] Environmental law is generally characterized as an area of positive law, as evidenced by the large body of statutes, regulations, and judicial decisions interpreting the legislation. ⁸⁵

Environmental law largely seeks to protect and preserve the human environment via a cooperative federalism model of environmental laws and policies. ⁸⁶Professor Lazarus has argued that environmental values include embracing the scientific method, the appreciation for all life forms, a concern with the quality of human life and health, a global rather than a nationalist view, and a sense of urgency regarding the survival of life on earth. ⁸⁷It also values a strong sense of urgency regarding the survival of life on earth. ⁸⁸Environmental law places a strong emphasis on sustainability, values a long-term time horizon, and has an enduring interest in environmental justice. ⁸⁹Similar to evolving conceptions of national security, scholars have also labeled the term *environmentalas* "so all-encompassing that it has been robbed of any operative meaning; it needs contours." ⁹⁰

In recent years, legal scholarship has increasingly wrestled with an offshoot of environmental law--climate change law. ⁹¹Until recently, much of the emphasis within climate change law has focused on climate mitigation measures--the reduction of GHG emissions to stem anthropogenic climate change. The development of law and scholarship concerning adapting to climate change and [*340] responding to extreme weather events ex post has largely lagged behind the climate mitigation discussion. ⁹²But this, too, has begun to change. For example, in the aftermath of an inadequate governmental response following Hurricane Katrina, Professors Dan Farber and Rob Verchick published a casebook on disaster law, connecting broader environmental stressors with disaster response. ⁹³

Internationally, climate adaptation efforts also largely took a back seat to climate mitigation efforts until the United Nations Conference of Parties in Bali in 2007. It was assumed that "the impacts of climate change would arise

⁸⁵ The very term "environmental law" did not even exist prior to 1969, Richard J. Lazarus, *The Making of Environmental Law* 47 (2004), and scholars generally consider the 1965 case *Scenic Hudson Preservation Conference v. FPC*, 354 F.2d 608 (2d Cir. 1965), to be the first major environmental case. The first major federal environmental law, the National Environmental Policy Act, was signed into law in 1970. Pub. L. No. 91-190, 83 Stat. 852 (1970) (codified at 42 U.S.C. §§4321-4347 (2018)).

⁸⁶ For an overview of the history of environmental law and its corresponding values, see generally Lazarus, *supra* note 85; Todd S. Agaard, *Environmental Law as a Legal Field: An Inquiry in Legal Taxonomy*, 95 Cornell L. Rev. 221, 264-71 (2010) (describing environmental law as encompassing two characteristics, "physical public resources" and "pervasive interrelatedness," and addressing scientific uncertainty); A. Dan Tarlock, *Is There a There There in Environmental Law?*, 19 J. Land Use & Envtl. L. 213, 248-53 (2004) (proposing five candidate principles of environmental law to include "minimize uncertainty before and as you act").

⁸⁷ See generally Lazarus, *supra* note 85.

⁸⁸ See, e.g., Robert Paehlke, *Environmentalism and the Future of Progressive Politics* 144 (1989).

⁸⁹ *Id.* at 160-61.

⁹⁰ Tarlock, *supra* note 86, at 221.

⁹¹ See Ruhl & Salzman, *supra* note 23, at 988-89.

⁹² See Michael Gerrard & Jody Freeman, *Global Climate Change and U.S. Law* (2d ed. 2014). One notable exception is the work of Professor Dan Farber and his co-authors. See Daniel A. Farber et al., *Disaster Law and Policy* (2d ed. 2010). Other scholars have begun to draw links between climate change and human rights law. See John H. Knox, *Linking Human Rights Law and Climate Change at the United Nations*, 33 Harv. Envtl. L. Rev. 477, 484-90 (2009) (describing the human rights implications of climate change on SIDS); Lisa Grow Sun & Ronnell Anderson Jones, *Disaggregating Disasters*, 60 UCLA L. Rev. 884, 917-18 (2013) (arguing for the elimination of the "rhetoric of war" from natural disaster decision-making).

⁹³ Farber et al., *supra* note 92; see also Ruhl & Salzman, *supra* note 23, at 988-89.

slowly over time and could be dealt with piecemeal, as they emerged." ⁹⁴Indeed, until recently, policymakers and scholars believed that, collectively, we had considerably more time to adapt to climate change's effects. Adaptation measures were once anathema to many climate advocates--including former Vice President Al Gore, who worried that focusing on adaptation would reinforce "the terrible moral consequences ... of delay." ⁹⁵

Scientists and policymakers recognize that time is no longer on our side, particularly when it comes to the national security impacts of climate change. As we need to adapt and prepare for climate change today, we must consider climate change's wide-ranging national security impacts. The renewed focus on climate change's national security impacts reflects the broader trend of opening the "climate aperture" beyond mitigation measures to encompass its effects on adaptation, human rights, disaster response, and national security.

B. National Security Law: An Ever-Expanding Area of Law Increasingly in Conversation with Climate Change

The term "national security" is not well defined in law and remains a multifaceted and expanding concept. ⁹⁶National security is such a capacious term [*341] without a single definition that it may broadly encompass whatever threatens to significantly degrade the quality of human life. ⁹⁷At the time of the nation's founding, national security centered around notions of the common defense. For example, in his earliest pronouncements of a strong federal government, Alexander Hamilton articulated a common defense rationale for the federal government. He conceived one purpose of the Union as for "the common defense of the members; the preservation of the public peace as well against internal convulsions as external attacks." ⁹⁸In doing so, he argued that a broad range of threats may ultimately arise and that the new nation must be prepared to respond. ⁹⁹

⁹⁴ Ian Burton, Int'l Inst. For Env't & Dev., *Beyond Borders: The Need for Strategic Global Adventures* (2008).

⁹⁵ Christina Larson, *The Adaptation Generation*, New Republic (Jan. 5, 2009), <https://perma.cc/5UCL-Z7T4>.

⁹⁶ Although the term "national security" is not defined in the law, within joint military doctrine it is defined as: A collective term encompassing both national defense and foreign relations of the United States with the purpose of gaining: a. [a] military or defense advantage over any foreign nation ... ; b. [a] favorable foreign relations position; or c. [a] defense posture capable of successfully resisting hostile or destructive action from within or without, overt or covert. DoD Dictionary, *supra* note 67, at 150. The linkage between environmental security and national security was first acknowledged in the 1995 National Security Strategy signed by President William J. Clinton. See The White House, *A National Security Strategy of Engagement and Enlargement* 11 (1995), <https://perma.cc/BKE3-KEGG> ("The nature of our response must depend on what best serves our own long-term national interests. Those interests are ultimately defined by our security requirements. Such requirements start with our physical defense and economic well-being. They also include *environmental security* as well as the security of our values achieved through expansion of the community of democratic nations." (emphasis in original)).

⁹⁷ See generally James E. Baker, *In the Common Defense: National Security Law for Perilous Times* 16-19 (2007) ("No single definition of national security is recognized in law or as policy predicate."). Relatedly, the more generalized term "security" remains a slippery, vague, and undertheorized concept. See Aziz Rana, *Who Decides on Security?*, 44 Conn. L. Rev. 1417, 1425 (2012) (noting that political actors with divergent ideological commitments defend the often-competing goals of security); Oona Hathaway, *COVID-19 Shows How the U.S. Got National Security Wrong*, Just Security (Apr. 7, 2020) (arguing that that we should "broaden the lens of national security ... [to include] pandemics, other public health threats, and climate change").

⁹⁸ The Federalist No. 23 (Alexander Hamilton).

⁹⁹ *Id.* ("[The common defense authorities] ought to exist without limitation, because it is impossible to foresee or define the extent of national exigencies, or the correspondent extent and variety of the means which may be necessary to satisfy them.").

At its core, the field of national security defines use of force matters to include defending the nation from an armed attack.¹⁰⁰ It includes "defense of national territory and welfare against external threats, especially threats of military [*342] or quasi-military attack."¹⁰¹ National security is associated with "military defense of a sovereign territory from *any* foreign threat."¹⁰² That foreign threat has historically included other nation states but has since evolved to encompass non-state actors and so called non-traditional security threats.

Earlier Supreme Court rulings focused on "national defense" and addressed congressional and executive authority over war powers and foreign affairs.¹⁰³ Gradually, the term "common defense" evolved into "national security."¹⁰⁴ During World War II, Harvard Professor Pendleton Herring chaired the Committee of Records of the War Administration, publishing the U.S. government's official account of the war and later authoring the National Security Act of 1947.¹⁰⁵ Herring argued that international affairs had become domestic problems, invoking a term--"national security"--that mirrored the Great Depression discourse of economic security.¹⁰⁶ National security law focuses on safeguarding the nation and responding to emerging threats. It seeks to protect and preserve national interests, uphold sovereign interests, and protect the lives of its military personnel and citizens. Within the national security infrastructure resides the military, which has a deep planning culture designed and equipped to prepare for future conflicts and threats--however they may be defined.¹⁰⁷

The "classical national security" view encompasses the defense of national territory and welfare against external threats, especially threats of military or quasi-military attack.¹⁰⁸ "New-Age" or neo-classical national security is unanchored from this definition and embraces and encompasses elements of the [*343] classical definition as well as environmental security. As I argue below, the challenges posed by climate change represent this next evolution.¹⁰⁹

¹⁰⁰ See Light, *Valuing National Security*, *supra* note 7, at 1797. For example, President Trump has characterized trade as a national security issue. See Ana Swanson & Paul Mozur, *Trump Mixes National and Economic Security, Plunging the U.S. Into Multiple Fights*, N.Y. Times (June 8, 2019), <https://perma.cc/SV25-KSPZ>.

¹⁰¹ Sanford E. Gaines, *Sustainable Development and National Security*, 30 Wm. & Mary Envtl. L. & Pol'y Rev. 321, 345-46 (2006); see, e.g., President Ronald Reagan, Address to the Nation on National Security (Feb. 26, 1986), <https://perma.cc/RJ42-EBYN>.

¹⁰² Rodrigo Alberto Vazquez Martinez, *Environmental Security and the Role of Law*, in *International Environmental Law-Making & Diplomacy Review* 31, 32 (Melissa Lewis et al. eds., 2015); see also Elizabeth L. Chalecki, *Environmental Security: A Guide to the Issues* 5-14 (2013); Jutta Brunnee, *Environmental Security in the Twenty-First Century: New Momentum for the Development of International Environmental Law?*, 18 Fordham Int'l L.J. 1742 (1995).

¹⁰³ See, e.g., *United States v. Robel*, 389 U.S. 258, 264 (1968) ("This concept of 'national defense' cannot be deemed an end in itself, justifying any exercise of legislative power designed to promote such a goal. Implicit in the term 'national defense' is the notion of defending those values and ideals which set this Nation apart.").

¹⁰⁴ See Rana, *supra* note 97, at 1458-62.

¹⁰⁵ Pub. L. No. 80-253, 61 Stat. 495 (1947) (codified at 50 U.S.C. §§3001-3234 (2018)). For an account of Professor Herring's role in the development of the term "national security," see Rana, *supra* note 97, at 1458-62.

¹⁰⁶ Rana, *supra* note 97, at 1462 (quoting Pendleton Herring, *The Impact of War* 15-16 (1941)).

¹⁰⁷ See Light, *Valuing National Security*, *supra* note 7, at 1778; see also Stephen Dycus, *National Defense and the Environment* 185-86 (1996).

¹⁰⁸ See, e.g., Reagan, *supra* note 101.

¹⁰⁹ This position is not entirely uncontroversial. The current Administration recently established a National Security Working Group to analyze the recent NCA that declared climate change a national security issue. See Juliet Eilperin et al., *White*

The modern field of national security law now includes traditional and non-traditional threats. It is best understood as a "multifaceted, rather than monolithic" concept.¹¹⁰ As such, the concept of national security has continued to evolve from purely military and strategic concerns to environmental concerns. Scholars and policy experts have begun to incorporate environmental concerns into broader conceptions of national security, focusing on the role of climate change as a catalyst for conflict.¹¹¹

While it is beyond the scope of this paper to comprehensively address international law and United Nations Security Council's ("UNSC") growing interest and engagement in climate change, a parallel trend has emerged outside the United States as international security institutions are increasingly engaged with non-traditional security threats.¹¹² Consider how the UNSC, the entity entrusted with the responsibility to maintain international peace and security, has expanded its definition of threats to international peace and security.¹¹³ Since the end of the Cold War, the UNSC has shown an increased willingness to address non-traditional threats to international peace and security beyond aggression and inter-state conflict. This includes terrorism, health crises (such as Ebola and AIDS), and other matters of environmental and ecological security.¹¹⁴ The UNSC has also convened several high-level meetings addressing climate change as a security issue. While it has not yet declared climate change a threat to international peace and security, the UNSC has shown a willingness to address the security impacts of climate change within recent UNSC resolutions.

[*344] National security threats have grown in recent years to encompass "whatever threatens to significantly degrade the quality of life of the people."¹¹⁵ Environmental threats--particularly the threats posed by climate change--satisfy this capacious definition. And this expansion is increasingly recognized by the Defense Department, intelligence communities, and the massive national security apparatus.

C. Environmental Law and National Security: From Conflict to Alignment?

Other scholars have accurately described national security as a public good akin to clean air and water: "It is too costly and unwieldy for individuals to provide for themselves, and it is impossible to exclude individuals from enjoying it once it is provided."¹¹⁶ Climate change's security challenges represent this continual evolution.¹¹⁷

House to Set Up Panel to Counter Climate Change Consensus, Officials Say, Wash. Post (Feb. 24, 2019), <https://perma.cc/68ZH-NYQF>.

¹¹⁰ Light, *Valuing National Security*, *supra* note 7, at 1797.

¹¹¹ *Id.* at 1798.

¹¹² U.N. Charter art. 24 ("Members confer on the Security Council primary responsibility for the maintenance of international peace and security, and agree that in carrying out its duties under this responsibility the Security Council acts on their behalf."). For an outstanding overview of many of the potential tools available to the UNSC in addressing climate change, see Climate Change and the U.N. Security Council (Shirley V. Scott & Charlotte Ku eds., 2018); Pierre Thielborger, *Climate Change and International Peace and Security: Time for a 'Green' Security Council?*, *in* From Cold War to Cyber War 67 (Hans-Joachim Heintze & Pierre Thielborger eds., 2016).

¹¹³ *See generally* U.N. Charter art. 39.

¹¹⁴ S.C. Res. 2349 (Mar. 31, 2017); S.C. Res. 2177 (Sept. 18, 2014); S.C. Res. 1983 (June 7, 2011); S.C. Res. 1625 (Sept. 14, 2005); S.C. Res. 1377 (Nov. 12, 2001); S.C. Res. 1308 (July 17, 2000).

¹¹⁵ Dycus et al., *supra* note 67, at 3 (internal citation omitted).

¹¹⁶ Light, *Valuing National Security*, *supra* note 7, at 1797 (internal citation omitted).

¹¹⁷ This has not been without some controversy. *See* Eilperin et al., *supra* note 109.

The effects of climate change on national security are increasingly real and all-encompassing. Consider extreme weather's damage inflicted upon national security infrastructure at Tyndall Air Force Base and Camp Lejeune following the 2018 hurricane season.

¹¹⁸Moreover, climate-security matters have both domestic and international dimensions with implications for environmental justice; for example, the world must address the problem of climate change refugees, many of whom are fleeing environmental degradation in developing countries.

The field of environmental security predates climate security and evolved from the concept of national security.

¹¹⁹It recognizes that environmental degradation and our race to use natural resources can undermine international peace and security.

¹²⁰Environmental security also "emphasizes the dimension of security in the traditional sense," by which it "refers to the prevention and management of conflicts precipitated by environmental decline."

¹²¹Climate security, which has only recently come into focus, is inextricably linked to longstanding environmental security concerns. Climate change acts as a threat accelerant to [*345] existing environmental stressors. There is no longer a direct conflict between national security and environmental law. Climate security concerns will require a role reversal and a rethinking of the historically combative relationship between national security and environmental law. Environmental threats serve as both a threat-accelerant to existing environmental stressors and a catalyst for conflict as states struggle with food and water insecurity exacerbated by climate change. ¹²²

Environmental statutes have historically been at odds with national security values and objectives. ¹²³

Within the major environmental statutes, Congress has carved out exemptions for national security activities that are in the "paramount interest" of the United States.

¹²⁴For example, the CAA delegates legal authority to EPA to regulate GHG emissions. However, within the same statutory framework, Congress has also delegated to the President the authority to exempt any emission source of any "department, agency, or instrumentality in the executive branch from compliance with such a requirement if he determines it to be in the paramount interest of the United States to do so." ¹²⁵

Scholars such as Professors Ruth Babcock ¹²⁶and Stephen Dycus ¹²⁷have highlighted the numerous ways in which national security concerns are in conflict with the environmental values discussed above. For

¹¹⁸ See Juliette Kayyem, *What Do You Do When Your Hurricane Backup Plan Is Under Water?*, Wash. Post (Sept. 4, 2019), <https://perma.cc/M5BJ-UD49>; Dave Phillips, *Exposed by Michael: Climate Threat to Warplanes at Coastal Bases*, N.Y. Times (Oct. 17, 2018), <https://perma.cc/VTE5-ZPZ9>.

¹¹⁹ Mark A. Levy, *Is the Environment a National Security Issue?*, 20 Int'l Security 35, 36 (1995) (proposing that global environmental degradation is a security threat to the United States). See generally Elizabeth L. Chalecki, *Environmental Security: A Guide to the Issues* 1-25 (2013).

¹²⁰ See, e.g., Vazquez Martinez, *supra* note 102, at 31-32.

¹²¹ Jutta Brunnee, *Environmental Security in the Twenty-First Century: New Momentum for the Development of International Environmental Law?*, 18 Fordham Int'l L.J. 1742 (1995).

¹²² See CNA Military Advisory Bd., *National Security and the Accelerating Risks of Climate Change* 2-3 (2014).

¹²³ See Hope Babcock, *National Security and Environmental Laws: A Clear and Present Danger?*, 25 Va. Envtl. L.J. 105, 110-20 (2007).

¹²⁴ Mark P. Nevitt, *Defending the Environment: A Mission for the World's Militaries*, 36 U. Haw. L. Rev. 27, 35 (2014) (describing how domestic environmental laws apply to the largest militaries of the world).

¹²⁵ 42 U.S.C. § 7418(b) (2018).

¹²⁶ See Babcock, *supra* note 123, at 107 (highlighting the post 9/11 tension between "the safety and continuation of the Republic and other values we hold dear, among them a healthy environment").

¹²⁷ See Stephen Dycus, *Osama's Submarine: National Security and Environmental Protection After 9/11*, 30 Wm. & Mary Envtl. L. & Pol'y Rev. 1, 4-5 (2005).

example, energy and defense officials have sought to suspend environmental protections in the event of national emergency or for reasons of national security; there was an uptick in such requests in the aftermath of 9/11.¹²⁸

Consider, too, how environmental law's underlying values are implemented via positive law and how these values may at times be in tension with underlying national security objectives. For example, the CAA's underlying, value-based goal is to protect human health, welfare, and the environment. Under the CAA, environmental protections are suspended for reasons of national security or when the President determines that it is in the "paramount interest" of the United States to do so.¹²⁹ In addition, the APA, which is often [*346] the vehicle for challenging agency actions when an environmental statute lacks a citizen-suit provision, exempts "military or foreign affairs" functions from rulemaking.¹³⁰ The CAA authorizes the President to suspend his or her authority in the name of national security:¹³¹

The President may exempt any stationary source from compliance with any standard or limitation under this section for a period of not more than 2 years if the President determines that the technology to implement such standard is not available and that it is in the national security interests of the United States to do so.¹³¹

But as we better understand the relationship between GHG emissions and climate change's security impacts, we will need a massive reduction of GHG emissions to keep global mean temperatures below two degrees Celsius. Climate change demands *greater* environmental protections, particularly from the military, which is an enormous emitter of GHG emissions.¹³² Indeed, in one recent study, the U.S. military emitted more GHG emissions than many sizable European nations.¹³³

Further, a temporal tension exists between perceived short-term benefits and climate change's pernicious, long-term costs. Short-term environmental exemptions may be sought for what is perceived to be a short-term national security benefit. But this has long-term negative implications for both the environment *and* national security. The climate-security century will increasingly be defined by both our ability to reduce our collective GHG emissions and how we adapt to climate change's multifaceted effects. GHG emissions remain in the atmosphere for a long period of time, exacerbating climate change's effects and serving as a long-term threat to international peace and security. For that reason, any request for an environmental national security exemption under the CAA has the effect of potentially undermining the long-term security situation. In the face of this temporal tension and the nature of anthropogenic climate change, lawmakers should rethink this existing environmental exemption within the CAA, refining what is meant by "paramount interest" and either doing away with this exemption or raising the standard to receive one.

In addition, national security has a far different origin story when compared to environmental law. National security law has largely developed from the top down--it is the historic province of policy elites and institutions at the federal and international levels. Indeed, the National Security Act created the [*347] modern, massive DoD apparatus and the CIA. Both have enormous budgets, and the DoD is the largest employer in the world. Under the Intelligence Reform Terrorism Prevention Act of 2004 ("IRTPA"),¹³⁴ the civilian ODNI lies at the top of a sprawling

¹²⁸ See, e.g., *id.* at 6.

¹²⁹ 42 U.S.C. § 7418(b).

¹³⁰ 5 U.S.C. § 553 (a)(1). Further, it does not include "military authority exercised in the field in time of war or occupied territory" in its definition of agency. *Id.* § 551(1)(G).

¹³¹ 42 U.S.C. § 7412(i)(4).

¹³² See generally *Costs of War*, *supra* note 27, at 2.

¹³³ *Id.*

¹³⁴ Pub. L. No. 108-458, 118 Stat. 3638 (2004) (codified in scattered sections of the U.S.C.).

intelligence hierarchy. ¹³⁵States and localities have historically played a more limited role with critical national security functions--raising armies, declaring war, concluding treaties--entrusted to the federal government via the Constitution. For example, within the United States, the federal armed force dwarfs the size of state National Guards. In contrast, environmental law has emerged from the bottom up--the result of grassroots organizing, advocacy, and the desire for environmental change from a diverse coalition of students, engaged citizen-environmentalists, scientists, and organizers. ¹³⁶

In fact, national security law and environmental law share many commonalities that have always existed. The threats posed by climate change are forcing us to think about the core normative values underlying these fields of law. Indeed, national security planners and policymakers bring a risk-based approach in their planning for future threats, not unlike the precautionary principle, a common thread that runs through much of environmentalism and natural resource management. And national security policymakers routinely plan for "known unknowns"--threats that they know may exist at a fundamental level but about which they seek greater certainty. ¹³⁷As we look ahead, climate change is the ultimate "known unknown"--we know that the Earth is warming, but we are uncertain about how much the Earth will warm, where and when weather extremes might occur, and whether tipping points will, in fact, occur. ¹³⁸

When commenting on the nature of the threat posed by climate change, retired Navy Admiral and former four-star NATO and European Commander James Stavridis stated:

What makes climate change so pernicious is that while the effects will only become more catastrophic far down the road, the only opportunity to fix the problem rests in the present. In other words, waiting "to be sure climate change is real" condemns us to a highly insecure future if we make the wrong bet. ¹³⁹

[*348] In addition, national security and environmental law both require constant and continuous updates to ensure they are receiving the best science, facts, and intelligence. This fact-and data-centered approach drives much of the decision-making process. Environmental law places a heavy emphasis on science and the "need to reduce ... inevitable uncertainty through the constant generation and application of new knowledge." ¹⁴⁰Similarly, national security decision-makers place a high emphasis on intelligence and fact-finding. They are constantly updating their intelligence and facts to reduce risk in an effort to minimize uncertainty before taking action. And just as national security planners are routinely evaluating and weighing the risks facing the nation, environmental law takes a risk-based approach that can lead to a prohibition of an activity. ¹⁴¹

D. Shared Values?: Sea Level Rise, Territorial Integrity, and Sovereignty

¹³⁵ *Id.* § 1011.

¹³⁶ See Rachel Carson, *Silent Spring* 144-54 (1962); Lazarus, *supra* note 85, at 47-54.

¹³⁷ See William B. Gail, *Climate's Troubling Unknown Unknowns*, N.Y. Times (Apr. 23, 2019), <https://perma.cc/VC8X-SW3M>.

¹³⁸ *Id.*

¹³⁹ James Stavridis, *America's Most Pressing Threat? Climate Change*, Bloomberg (Jan. 11, 2018), <https://perma.cc/6R42-D585>.

¹⁴⁰ Tarlock, *supra* note 86, at 220.

¹⁴¹ Holly Doremus, *Constitutive Law and Environmental Policy*, 22 Stan. Envtl. L.J. 295, 318-19 (2003) (identifying one of four distinctive features of environmental law that make it especially intractable as a "high level of uncertainty"--yet another feature shared with national security law, which must also assess future risks in a highly uncertain world); see also Tracy Hester et al., *Restating Environmental Law*, 40 Colum. J. Envtl. L. 1 (2015) ("[Environmental law] embodies an accumulation of complex legal and policy decisions intended to protect human health and the environment"); Tarlock, *supra* note 86, at 248-53 (proposing five "candidate principles" of environmental law).

Consider, for example, how both environmental and national security law uphold sovereignty as a core value. National security law focuses on safeguarding the nation and responding to emerging threats, however defined. It seeks to protect and preserve national interests, uphold sovereign interests, and protect the lives of its military members and citizens. National security law has historically emphasized national sovereignty and the protection of territorial integrity. Climate change, too, is threatening our territorial integrity and sovereignty as ice sheets melt, sea levels rise, and coastal erosion occurs.

Climate change litigation demonstrates, in part, this convergence of values, particularly as it relates to sovereignty and territorial integrity. In what follows, I highlight three climate change cases, all of which share core values with both environmental and national security law.

1. Massachusetts v. EPA

In *Massachusetts v. EPA*, the Supreme Court held that the CAA authorizes EPA to regulate GHG emissions in the event that it forms a "judgment" that such emissions contribute to climate change.¹⁴² In the Court's injury analysis, [*349] it relied upon scientific experts' testimony that global warming is causing sea levels to rise, "swallowing Massachusetts' coastal land."¹⁴³ Further, the Court noted that the severity of injury will only increase over time.¹⁴⁴

According to the Court, states are entitled to "special solicitude" in the standing analysis because they surrendered "sovereign prerogatives" when they entered the Union.¹⁴⁵ These sovereign prerogatives are now lodged in the federal government. Congress has ordered EPA--a federal agency--to protect Massachusetts from air pollutants that "cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare," and the state is entitled to seek redress if the agency fails to fulfill its mandate.¹⁴⁶ A state surrenders certain sovereign prerogatives, foreign affairs, and national security functions when it enters into the Union. Today, Massachusetts cannot negotiate a climate treaty with China or India and enforce its provisions as a legally binding matter without running afoul of the Supremacy Clause. Nor can it declare war or competently defend itself from attack by outside threats.¹⁴⁷ The federal government therefore has a special duty to protect Massachusetts from injury, not unlike if Massachusetts was invaded by a foreign enemy. Today's "enemy" is climate change.

2. Native Village of Kivalina v. Exxon Mobil Corp.

Consider, too, the climate security implications of a second climate change litigation case, *Native Village of Kivalina v. Exxon Mobil Corp.*¹⁴⁸ In *Kivalina*, a Native Alaskan village sued Exxon Mobil and several large fossil fuel producers, alleging that these entities' massive GHG emissions eroded the villagers' land and threatened their village with imminent destruction.¹⁴⁹ The village, which is located on a barrier reef in the Arctic Circle, is uniquely vulnerable to climate change's impact.¹⁵⁰ Sea ice protects the village from storm waves and surges,

¹⁴² 549 U.S. 497, 528 (2007). While the case focused on GHG emissions from cars, under the CAA the definition of "air pollutant" applies to all GHGs, regardless of source. See *Endangerment Finding*, *supra* note 84.

¹⁴³ *Id.* at 522.

¹⁴⁴ *Id.* at 522-23.

¹⁴⁵ *Id.* at 519.

¹⁴⁶ *Id.* at 534.

¹⁴⁷ Of course, Massachusetts does have a state National Guard--the modern militia--that reports to the Commonwealth's governor for day-to-day operations.

¹⁴⁸ 696 F.3d 849 (9th Cir. 2012).

¹⁴⁹ *Id.* at 853.

yet climate change is rapidly melting the protective sea ice.¹⁵¹ Massive erosion is occurring in the village, harming critical infrastructure, and threatening the city [*350] with imminent destruction.¹⁵² If the village is not relocated immediately, it may cease to exist.¹⁵³

3. Our Children's Trust: *Juliana v. United States*

In *Juliana v. United States*,¹⁵⁴ the plaintiffs (children-litigants) sued the federal government for violating their constitutional rights to a livable environment. The litigants argue that "this is a constitutional case of great urgency about the physical and emotional security of American youth."¹⁵⁵ In doing so, the litigants argue that the government violated their due process by harming their personal security and bodily integrity.¹⁵⁶ In making a novel substantive due process claim before the Ninth Circuit, the litigants assert that the United States infringed upon their right to life and personal security by knowingly authorizing the extraction of fossil fuels, despite knowing of their immense cost.¹⁵⁷ Further, the litigants point to numerous national security harms to include storm surges, hurricanes, droughts, wildfires, and a generalized "national security destabilization" throughout various regions of the world.¹⁵⁸ Once again, *Juliana* showcases how climate change shines light on overlapping values between environmental law and national security law. After all, both seek to safeguard the security, health, and welfare of each citizen.

The *Juliana* litigants recently lost at the Ninth Circuit. In the majority opinion, the court held that the plaintiffs' alleged injuries were not redressable. Specifically, the court ruled that "it was beyond the power of an Article III court to order, design, supervise, or implement the plaintiffs' requested remedial plan,"¹⁵⁹ and that the "host of complex policy decisions [required to redress the plaintiffs' alleged harms are] entrusted, for better or worse, to the wisdom and discretion of the executive and legislative branches."¹⁶⁰ In dissent, Judge Staton focused on climate change's irreversible nature that will surely devastate [*351] the environment for future generations.¹⁶¹ Specifically, Judge Staton highlighted the Constitution's "perpetuity principle" under which various textual provisions assume a structural principle. Article IV, for example, "guarantees to every state a republican form of government ... and shall protect each of them against Invasion and against domestic violence."¹⁶² While not

¹⁵⁰ See *id.*

¹⁵¹ *Id.*

¹⁵² *Id.*

¹⁵³ *Id.* at 853 n.2 (quoting U.S. Gov't Accountability Office, GAO 04-142, Alaska Native Villages: Most Are Affected by Flooding and Erosion, But Few Qualify for Federal Assistance 30, 32 (2003) ("It is believed that the right combination of storm events could flood the entire village at any time... . Remaining on the island ... is no longer a viable option for the community.")).

¹⁵⁴ *Juliana v. United States* (*Juliana II*), 947 F.3d 1159 (9th Cir. 2020); *Juliana v. United States* (*Juliana I*), 217 F. Supp. 3d 1224 (D. Or. 2016).

¹⁵⁵ Brief for the Plaintiffs-Appellees' at 3, *Juliana II*, 947 F.3d 1159, No. 18-36082, (9th Cir. Feb. 22, 2019).

¹⁵⁶ *Id.* at 52.

¹⁵⁷ *Id.* at 42.

¹⁵⁸ *Juliana I*, 217 F. Supp. 3d at 1265 (summarizing the injuries asserted by the children-litigants).

¹⁵⁹ *Juliana II*, 947 F.3d at 1171.

¹⁶⁰ *Id.*

¹⁶¹ See *id.* at 1175, 1175 (Staton, J., dissenting).

¹⁶² *Id.* at 1178-79 (quoting U.S. Const. art. IV, § 4).

mentioning national security per se, *Juliana* highlights the overlapping Venn diagram between environmental law's values and national security law's values. Protection of the nation's sovereignty, territorial integrity, and constitutional continuance from all threats is a core national security concern, directly aligned with Judge Staton's emphasis of the perpetuity principle.

III. Climate Security: A Role for the National Emergencies Act and the Military as Norm Entrepreneur?

A. The National Emergencies Act and Climate Change

In the face of congressional inaction on climate change, commentators have begun to speculate that emergency action may ultimately be necessary to reduce our GHG emissions.¹⁶³ Do existing statutes allow the President, independent of Congress, to take ex ante measures to declare climate change a "national emergency"?¹⁶⁴ As discussed, Congress has already delegated emergency authority to the President via the 1976 National Emergencies Act ("NEA").¹⁶⁵ Use of the NEA to address climate change gained new attention in February 2019 when President Trump invoked the Act for a non-traditional threat in declaring that the "current situation at the southern border presents a border security and humanitarian crisis that threatens core national security interests and constitutes a national emergency."¹⁶⁶ While this border emergency declaration was (and remains) enormously controversial, it nevertheless showcased [*352] how existing law grants the President broad discretion to utilize existing emergency authorities to combat traditional and non-traditional security threats. Since President Trump's border declaration, commentators, scholars, and politicians have begun to speculate whether climate change could potentially be declared a national emergency by a future President.¹⁶⁷ In what follows, I describe the scope of the NEA and address what measures a future President could take to combat climate change.

While the President is afforded broad discretion to declare a national emergency to address wide-ranging threats, the President may well have difficulty in implementing follow-on measures based upon existing case law addressing emergency powers and separation of powers.¹⁶⁸ Under the NEA, the President has broad authority to declare a national emergency:

¹⁶³ See, e.g., Jackie Flynn Mogensen, *Five Things a Democratic President Could Do by Declaring a National Emergency over Climate Change*, Mother Jones (Mar. 8, 2019), <https://perma.cc/8GJJ-SEQ8>. A related question--is climate change a threat to international peace and security under international law?--is beyond the scope of this paper. In recent years, the United Nations Security Council has shown an increased willingness to proactively address non-traditional security threats beyond aggression and inter-state armed conflict. This suggests a greater role for the UNSC on matters of environmental and climate security, a subject of a forthcoming project.

¹⁶⁴ *Id.* A "climate emergency" would likely be declared via executive order, bypassing Congress. This will, of course, be enormously controversial. For a thoughtful critique of the current Administration's heavy reliance on executive orders, see David M. Driesen, *President Trump's Executive Orders and the Rule of Law*, 87 UMKC L. Rev. 489 (2019).

¹⁶⁵ Pub. L. No. 94-412, 90 Stat. 1255 (codified at 50 U.S.C. §§1601-1651 (2018)).

¹⁶⁶ Proclamation No. 9844, 84 Fed. Reg. 4949 (Feb. 15, 2019).

¹⁶⁷ Following President Trump's emergency declaration, Senator Marco Rubio (R-FL) stated on CNBC, "We have to be careful about endorsing broad uses of executive power. Tomorrow the national emergency might be climate change." Sen. Claire McCaskill (D-MO) wrote, "The Pentagon, Congress and this administration have all said climate change is a serious threat to national security ... will the next President bypass Congress and declare an emergency? The door can swing both ways." Scott Waldman, *Next President Could Declare a Climate Emergency, GOP Fears*, E&E News (Jan. 11, 2019), <https://perma.cc/SR26-ELEB>.

¹⁶⁸ *Youngstown Sheet & Co. v. Sawyer*, 343 U.S. 579, 649-52 (1952) (Jackson, J., concurring) (discussing limitations to presidential emergency powers).

With respect to acts of Congress authorizing the exercise, during the period of a national emergency, of any special or extraordinary power, the President is authorized to declare such national emergency. Such proclamation shall immediately be transmitted to the Congress and published in the Federal Register. ¹⁶⁹

Once a national emergency is declared, the President can turn to existing delegated legal authorities baked into the text of other statutes. In essence, an emergency declaration breathes life into 136 statutory provisions covering a wide variety of issues. The Brennan Center for Justice at New York University Law School categorized these statutes as addressing federal employees; asset seizure, control, and transfer; military and national defense; land management; public health; and international relations. ¹⁷⁰There are no emergency provisions that address climate change specifically, and the existing environmental provisions actually *suspend* environmental protections during times of national emergency. ¹⁷¹

[*353] The NEA was passed in the aftermath of Vietnam and Watergate, following congressional concern that too much emergency power was already vested in the executive branch. ¹⁷²Further, once a national emergency was declared, presidents were reluctant to "undeclare" them. For example, President Truman issued a declaration of national emergency in 1950 in response to hostilities in Korea that remained in effect throughout the Vietnam War. ¹⁷³

The term "emergency" is not defined in statute and Congress provides the President with broad discretion in making this determination. Congress can terminate the emergency by concurrent resolution. ¹⁷⁴The NEA envisions that Congress would meet within six months of a national emergency declaration "to determine whether that emergency shall be terminated." ¹⁷⁵But since the NEA's passage, Congress has largely failed to follow through on terminating prior emergencies. Since the NEA was passed in 1976, it has been invoked forty-one times and there are currently thirty-one emergencies in effect at the time of this writing. ¹⁷⁶Further, the NEA authorizes Congress to terminate the emergency by concurrent resolution, ¹⁷⁷but the ability for Congress to

¹⁶⁹ 50 U.S.C. § 1621(a).

¹⁷⁰ See Brennan Ctr. for Justice, A Guide to Emergency Powers and Their Use (2018), <https://perma.cc/MG3B-7QYC>.

¹⁷¹ See 42 U.S.C. § 7410(f) (authorizing the President to make a determination, following Governor's petition, that a national or regional emergency exists, thereby suspending any part of a state CAA implementation plan); John Schwartz & Tik Root, *Could a Future President Declare a Climate Emergency?*, N.Y. Times (Jan. 16, 2019), <https://perma.cc/PMQ9-CEZK>.

¹⁷² For an outstanding summary of the legislative background and history of the National Emergencies Act, see Harold C. Relyea, Cong. Research Serv., RL98-505, National Emergency Powers (2007) [hereinafter CRS Emergency].

¹⁷³ *Id.* at 8. The NEA kept in place four national emergency proclamations that were issued pursuant to a President's Article II constitutional authority in 1933, 1950, 1970, and 1971.

¹⁷⁴ 50 U.S.C. § 1622(a)(1). But this concurrent resolution amounted to a "legislative veto" provision. This was invalidated by the Supreme Court in *Immigration and Naturalization Service v. Chadha*, 462 U.S. 919 (1983). This provision was amended in 1985 to substitute a "joint resolution" to terminate a national emergency. 99 Stat. 405, 448 (1985); see also CRS Emergency, *supra* note 172, at 12.

¹⁷⁵ 50 U.S.C. § 1622(b).

¹⁷⁶ Kate Aronoff, *Climate Change, Not Border Security, is the Real National Emergency*, Intercept (Jan. 28, 2019), <https://perma.cc/G6ZZ-NJSB> (quoting the analysis of Jeffrey Toobin). Under U.S. domestic law, there are four emergency framework statutes: (1) The NEA; (2) The Public Health Service Act of 1944, 42 U.S.C. §§201-300 (2018); (3) Robert T. Stafford Disaster Relief Act and Emergency Act of 1988, 42 U.S.C. § 5121-5202 (2018); and (4) Defense Drawdown Act of 1961, 22 U.S.C. § 2318 (2018). Separate from these four framework statutes, there are other statutory provisions that become available once the President declares a national emergency.

¹⁷⁷ 50 U.S.C. § 1622(a)(2).

utilize the legislative veto to terminate such emergencies was declared unconstitutional in *INS v. Chadha*.
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As a foundational matter, the NEA was passed to curtail, clean up, and clarify the executive branch's emergency authorities--which had expanded throughout the mid-20th century. The NEA was passed to expand and delegate [*354] further authorities to the President.¹⁷⁹ Since the NEA's passage, presidents have invoked its activities liberally, regardless of political party. President Carter declared two national emergencies in 1979 addressing Iranian government property--those emergencies remain in effect.¹⁸⁰ President Reagan declared six national emergencies in his two presidential terms, President George H.W. Bush declared five, and President Clinton declared seventeen national emergencies ranging from blocking the proliferation of weapons of mass destruction to regulating the anchorage and movement of vessels with respect to Cuba.¹⁸¹

B. Applying the National Emergency Framework to Climate Change

In what follows, I address the existing statutory framework that could be utilized by future presidents to address climate change as a national emergency. The analysis focuses on the NEA as a mechanism to address climate change as a national emergency *before* any specific climactic event. The Public Health Service Act and Stafford Act are relevant for fully understanding the authorities in place in the *aftermath* of extreme weather events and public health emergencies.¹⁸² Of course, outside of these existing statutory grants of authority following an emergency declaration, the President possesses independent national security power to defend the nation against any threat under the U.S. Constitution.¹⁸³

[*355] Surveying the field of available emergency provisions, there are no explicit provisions that would authorize the seizure of GHG-emitting power plants, limit vehicle miles traveled, or otherwise reduce the amount of GHG emissions from different industries. Contrary to the underlying goals of a national climate emergency declarations--that would seek an abatement of GHG emissions--some of the existing provisions loosen or eliminate environmental restrictions during time of declared national emergency. For example, under the CAA, the governor of a state may petition the President to determine that a national or regional energy emergency exists of such

¹⁷⁸ 462 U.S. 919 (1983).

¹⁷⁹ 50 U.S.C. § 1601. Effective two years after the statute's approval, the NEA terminated "all powers and authorities possessed by the President [or] any other officer or employee of the Federal government ... as a result of the existence of any declaration of national emergency." *Id.*

¹⁸⁰ Exec. Order No. 12,211, 45 Fed. Reg. 26,685 (Apr. 17, 1980); Exec. Order No. 12,170, 44 Fed. Reg. 65,729 (Nov. 14, 1979).

¹⁸¹ CRS Emergency, *supra*note 172, at 1.

¹⁸² The Stafford Act authorizes a governor to petition the President for a declaration of major disaster or emergency when she reaches "a finding that the disaster is of such severity and magnitude that effective response is beyond the capabilities of the State and the affected local governments and that Federal assistance is necessary." The Stafford Act, § 401, 42 U.S.C. § 5170. It defines emergency as "any occasion or instance for which, in the determination of the President, Federal assistance is needed to supplement State and local efforts and capabilities to save lives and to protect property and public health and safety, or to lessen or avert the threat of a catastrophe in any part of the United States." 42 U.S.C. § 5122(1). The Public Health Service Act authorizes the Secretary of Health and Human Services to declare a public health emergency. Public Health Service Act, § 319, 42 U.S.C. § 247(d). This was most recently invoked in 2017 when President Trump instructed the HHS Secretary to combat the opioid crisis. Combatting the National Drug Demand and Opioid Crisis, 82 Fed. Reg. 50,305 (Oct. 26, 2017).

¹⁸³ See U.S. Const. art. II. There is no comprehensive emergency regime within the Constitution. Congress has the authority to suspend the writ of habeas corpus "when in Case of Rebellion or Invasion the public Safety may require it." *Id.* art. I, § 9, cl. 2. The Constitution provides "for calling forth the Militia to execute the Laws of the Union, suppress Insurrections and repel Invasions." *Id.* art. I, § 8, cl. 15. For an overview of the President's authority as Commander-in-Chief to combat climate change, see Mark P. Nevitt, *The Commander in Chief's Authority to Combat Climate Change*, 37 Cardozo L. Rev. 437 (2015).

severity for a temporary suspension of part of the CAA implementation plan.¹⁸⁴The Energy Policy and Conservation Act of 1975¹⁸⁵waives the thirty-day comment period on proposed rules and regulations "if the President finds that such waiver is necessary to act expeditiously during an emergency affecting the national security of the United States."¹⁸⁶Further, these emergency provisions are largely based on responding to sudden changes where Congress lacks adequate time to act. One of the few existing environmental-related emergency provisions that could potentially assist in a climate change emergency addresses the prohibition of the export of agricultural commodities, a significant contributor of GHG emissions.¹⁸⁷Under an export sales contract, the President may not curtail the export of any agricultural commodity except in case of war or national emergency.¹⁸⁸The term "agricultural commodity" is broadly defined in statute to encompass "any agricultural commodity, food, feed, fiber or livestock."¹⁸⁹To be sure, this curtailment or prohibition of agricultural commodities only applies to the U.S. export of agricultural commodities. Several implementation questions remain (e.g., what should happen to livestock and food that is not exported?). And it remains uncertain whether this would have an appreciable impact on reducing GHG emissions. Nevertheless, a climate emergency declaration that limits the export of certain agricultural commodities may play a powerful signaling role to the rest of the world, regardless of its substantive mitigation impact. Of course, ex post emergency declarations following natural disasters via emergency declarations such as the Stafford Act remain legally valid options. Nevertheless, there are several [*356] non-explicit provisions that an innovative President could arguably turn to in the event she desires to declare climate change a national emergency.

First, there is a law addressing governmental oil leases on the outer continental shelf that could suspend offshore oil drilling operations in the United States' continental shelf.¹⁹⁰Specifically, "the President of the United States may, from time to time, withdraw from disposition any of the unleased lands of the outer Continental Shelf."¹⁹¹This relatively obscure provision in natural resource regulation requires oil leases to have clauses that suspend the lease (and hence oil production) during national emergencies.¹⁹²This has the potential to limit offshore oil and gas extraction at the U.S. continental shelf--an enormous swath of seabed that extends for hundreds of miles.¹⁹³

Second, the Secretary of Transportation has broad delegated authority to coordinate transportation during national emergencies.¹⁹⁴The transportation sector is an enormous source of greenhouse gas emissions.¹⁹⁵Read broadly, if climate change is declared a national emergency, the Secretary of Transportation could further

¹⁸⁴ 42 U.S.C. § 7410(f).

¹⁸⁵ Pub. L. 94-163, 89 Stat. 871 (1975) (codified at scattered sections of 12, 15, 42 and 50 U.S.C.).

¹⁸⁶ 42 U.S.C. § 6393(a)(2)(A).

¹⁸⁷ 7 U.S.C. § 5712(c). *See generally* IPCC, Agriculture, Forestry, and Other Land Use (AFOLU) 816-18 2018 (noting that the agriculture, forestry and land use sector is responsible for nearly a quarter of anthropogenic GHG emissions).

¹⁸⁸ 7 U.S.C. § 5712(c).

¹⁸⁹ *Id.* § 5602.

¹⁹⁰ 43 U.S.C. § 1341. Thank you to Professor Daniel Farber for first alerting me to this provision.

¹⁹¹ *Id.*

¹⁹² *Id.*

¹⁹³ It is beyond the scope of this Article to address where the U.S. continental shelf begins and ends. *See generally* United Nations Convention on the Law of the Sea ("UNCLOS III"), Dec. 10, 1982, Art. 76.

¹⁹⁴ *See* 49 U.S.C. § 114(g)(1)(A)-(D).

¹⁹⁵ *Fast Facts on Transportation Greenhouse Gas Emissions*, EPA, <https://perma.cc/DH8E-H73C>.

restrict the trucking and automobile industry's greenhouse gas emissions. This could potentially be used to decrease GHG emissions from auto and truck use on federally funded highways.

Third, the Military Construction Codification Act¹⁹⁶--the same law being invoked to fund a border wall--is another potential tool to invest in climate adaptation measures at military installations vulnerable to storm surge and sea level rise. While the law is not focused on the environment or climate change, there exists a valid legal basis for investment in climate resilient infrastructure. After all, the law requires that any construction must "require use of the armed forces" and be "necessary to support such use of the armed forces."¹⁹⁷ Relatedly, there are provisions that authorize the reprogramming of funds in the event of a declared national emergency. This could serve as a vehicle to fund climate adaptation measures in localities particularly vulnerable to sea level rise.¹⁹⁸

[*357] Fourth, the President has the authority to extend loan guarantees to critical industries in national emergencies¹⁹⁹ and respond to industrial shortfalls.²⁰⁰ These authorities could potentially be utilized to support renewable energy and electric vehicle production.

A climate change emergency declaration would be enormously controversial and would likely be the subject of litigation, primarily from the fossil fuel industry. *Youngstown Sheet & Tube Co. v. Sawyer*²⁰¹ would serve as the starting point in weighing the success of any litigation stemming from a climate-emergency declaration. The President would likely assert that she is acting in the first of Justice Jackson's zones. In doing so, she will likely argue that she was merely acting pursuant to the NEA and accompanying statutes--"express or implied authorization."²⁰² Further, the President would argue, Congress had completely failed to amend or update the NEA; nor has Congress taken an active role in terminating prior emergencies--is this not evidence of a "gloss on 'executive Power?'"²⁰³ Hypothetical litigants, likely from the fossil fuel industry, would instead argue that the President's powers were at the "lowest ebb"--Congress has yet to pass climate change legislation and has not provided explicit or implicit authority to the President to address climate change via the CAA or other environmental statutes.²⁰⁴ Challenges to Presidential authority will be bolstered if the President uses her authority to seize domestic coal plants or elements of the fossil fuel industry within the United States. After all, Justice Jackson would "indulge the widest latitude of interpretation" when the "instruments of national force ... [are] turned against the outside world."²⁰⁵ But when this power is "turned inward ... it should have no such indulgence."²⁰⁶

¹⁹⁶ 10 U.S.C. § 2808.

¹⁹⁷ *Id.*

¹⁹⁸ Such provisions include the following executive powers: In the event of a declaration of war or a declaration by the President of a national emergency in accordance with the National Emergencies Act, Pub. L. 94-412, 90 Stat. 1255 (codified at 50 U.S.C. § 1601 *et seq*) that requires or may require use of the Armed Forces, the Secretary, without regard to any other provision of law, may (1) terminate or defer the construction, operation, maintenance, or repair of any Department of the Army civil works project that he deems not essential to the national defense, and (2) apply the resources of the Department of the Army's civil works program, including funds, personnel, and equipment, to construct or assist in the construction, operation, maintenance, and repair of authorized civil works, military construction, and civil defense projects that are essential to the national defense. 33 U.S.C. § 2293 (parentheses in original).

¹⁹⁹ 50 U.S.C. § 4531.

²⁰⁰ *Id.* § 4533.

²⁰¹ *Steel Seizure*, 343 U.S. 579 (1952).

²⁰² *Id.* at 635-36 (Jackson, J., concurring).

²⁰³ *Id.* at 610-11 (Frankfurter, J., concurring).

²⁰⁴ *Id.* at 637 (Jackson, J., concurring).

²⁰⁵ *Id.* at 645.

Nevertheless, there may be a rhetorical advantage of declaring a "climate emergency" without actuating specific powers under the NEA. At the time of this writing, Senator Bernie Sanders (I-VT) proposed a new climate emergency [*358] resolution, stating that there must be "massive-scale mobilization to halt, reverse, and address [climate change's] consequences and causes."²⁰⁷ While the Senate resolution makes clear that "nothing in this concurrent resolution constitutes a declaration of a national emergency for purposes of any Act of Congress," it seizes upon the climate emergency vernacular to highlight the severity of the threat and provide a potential means to rally support and spur action.²⁰⁸

C. Opportunity: Intelligence and National Security as Climate Change Validators and Norm Entrepreneurs

The military and national security community are trusted apolitical institutions that bring an objective, risk-based approach to the many voices in the climate change discussion. This creates an opportunity for the national security, intelligence, and military communities to act as a credible, non-partisan information broker in the heavily politicized debate about climate change science.

Unfortunately, climate change action in the United States has been stymied by a political landscape that has cast doubt on anthropogenic climate change, calling into question the consensus view on climate science. Despite the IPCC's overwhelming conclusion that global climate change is caused by human activity, a survey by the Pew Research Center found that only 67% of Americans believe there is "solid evidence" of "global warming," with respondents dividing largely along political party lines.²⁰⁹ Even among those who believe that the climate is undergoing rapid transformation, there remains significant skepticism concerning the veracity of *anthropogenic* climate change despite the overwhelming scientific evidence outlined in Part I. This has influenced the public's perception of the threats posed by climate change, thwarting action on climate.

While it is beyond the scope of this Article to address the wide-ranging causes of climate misinformation and inaction, the military and national security community could play an important role in changing societal norms and could potentially validate climate science. Take a critical subset of the national security community: the U.S. military. As an institution, the military enjoys a high degree of confidence among the American public as a nonpartisan arbiter of the threats facing the nation. For example, Gallup polls taken over this decade show that 72% of people had "a great deal" or "quite a lot" of confidence in [*359] the military but only 12% of the population felt the same about Congress.²¹⁰ This confidence stems, in part, from the military's apolitical nature, which is reinforced by strict prohibitions on political activity within the institution.²¹¹ Similarly, the intelligence community (heavily staffed with military members) is viewed as a credible, non-partisan voice on the threats facing the nation and the world.

And there are hopeful signs that the national security community's increasing interest in climate change may help reverse some of this skepticism and validate climate change as an important national security issue. By highlighting climate change's security impacts in a clear-eyed and apolitical manner, the military community could serve as a

²⁰⁶ *Id.*

²⁰⁷ S. Con. Res. 22, 116th Cong. (2019) ("The United States Department of State, Department of Defense, and intelligence community have identified climate change as a threat to national security, and the Department of Homeland Security views climate change as a top homeland security risk ...").

²⁰⁸ *Id.*

²⁰⁹ Light, *Valuing National Security*, *supra*note 7, at 1780.

²¹⁰ Jeffrey M. Jones, *Congressional Job Approval Essentially Flat at 12%*, Gallup (Mar. 21, 2012), <https://perma.cc/Q6DL-7QPP>; Jim Norman, *Americans Give Military Branches Similar High Marks*, Gallup (May 26, 2017), <https://perma.cc/X6UP-WTU7>.

²¹¹ For example, uniformed members are legally prohibited from having an active role in political activities. Dep't of Def., DODD 1344.10, Political Activities by Members of the Armed Force (2008).

prod for climate action. Indeed, the national security community can serve as a potential bulwark in validating the existing science and highlighting the importance of climate change as an issue that deserves our collective attention.²¹²This can help drive resources and research.²¹³

Perhaps most importantly, the military has a deep planning culture that manages risk--not unlike environmental law's risk-based approach to conservation and natural resource management. At its core, climate change is not unlike any other security risk. We know it is occurring, but we do not know precisely how it will affect us. Within the military, the planning culture is implemented via formalized planning processes that include environmental considerations.²¹⁴For long-range and strategic planning, climate change considerations can and should be factored into the planning process. Indeed, this is already occurring through the geographic combatant commanders--high-ranking military leaders charged with planning for and executing the most sensitive military operations.²¹⁵As climate change transforms the operational environment, the military has the duty and responsibility to protect the nation's national security interests, regardless of their source.

Outside the environmental context, the military has often been at the vanguard of important societal and policy changes. For example, President Truman issued Executive Order 9981 in 1948, abolishing segregation in the military [*360] sixteen years prior to the passage of the Civil Rights Act.²¹⁶Many scholars have concluded that contact between white and black soldiers in the U.S. military correlated with greater support for racial integration in civilian life.²¹⁷By extension, greater engagement and contact with the national security implications of climate change may have similar effects.

Conceptualizing climate change as a national security issue can play an important role in validating climate change as an issue that demands our attention and resources. While climate science has been subject to intense scrutiny and politicization, the national security and military intelligence reports addressing threats caused by climate change remain largely (but not entirely) resistant to politicized attacks. Professor Sarah Light has described the military as the "unequivocal validator of climate science."²¹⁸

Framing issues as bona fide national security challenges can similarly be a powerful linguistic tool that drives resources and public perceptions. Climate change language has slowly become "securitized."²¹⁹For example, former Secretary of State John Kerry recently exclaimed that climate change was a "weapon of mass destruction," while former Defense Secretary William Perry recently compared climate change to a slowly unfolding

²¹² See generally Light, *Valuing National Security*, *supra* note 7.

²¹³ There appears to be a strong historical basis for this. In the early nineteenth century following the War of 1812, federal funding for roads enjoyed strong political support when it was connected to military necessity.

²¹⁴ See Mark P. Nevitt, *Environmental Law in Military Operations*, in U.S. Military Operations: Law, Policy, and Practice 401, 405 (2016) (Geoffrey S. Corn et al. eds., 2015).

²¹⁵ See Mark P. Nevitt, *The Operational and Administrative Militaries*, 53 Ga. L. Rev. 905, 909 (2019) (discussing the role of combatant commanders).

²¹⁶ Exec. Order No. 9981, 13 Fed. Reg. 4313 (Jul. 26, 1948).

²¹⁷ See, e.g., Kenneth L. Wilson, *The American Soldier Revisited: Race Relations and the Military*, 59 Soc. Sci. Q. 451, 465 (1975).

²¹⁸ Light, *Valuing National Security*, *supra* note 7, at 1778; see also Light, *The Military-Environmental Complex*, *supra* note 7.

²¹⁹ See, e.g., Paris Agreement to the United Nations Framework Convention on Climate Change, *supra* note 41, at 1 ("The need for an effective and progressive response to the urgent threat of climate change on the basis of the best available scientific knowledge."); Richard Lazarus, *Presidential Combat Against Climate Change*, 126 Harv. L. Rev. F. 152, 154 (2013); Jeff McMahon, *Former Defense Secretary Compares Climate Change to Nuclear War*, Forbes (Dec. 9, 2018), <https://perma.cc/5XEK-JGT6>.

"nuclear war."²²⁰ And some climate scientists and politicians are now urging a "wartime footing" to radically transform the economy in the face of challenges posed by climate change. Representative Alexandria Ocasio-Cortez (D-NY) and Senator Ed Markey (D-MA) have explicitly acknowledged climate change's national security impacts in their Green New Deal proposal, stating that climate change "constitutes a direct threat to the national security of the United States ... by impacting the economic, environmental, and social stability of countries and communities around the world and by acting as a threat multiplier."²²¹

[*361] President Obama stated that we "must do more to combat climate change."²²² Lazarus has written of "Presidential Combat Against Climate Change," highlighting the apolitical nature of military leaders that only care about real science, not just "political" science.²²³

Increasingly, national security preferences and desired outcomes are aligned with environmental values and outcomes. Light and others have accurately described national security as a public good akin to clean air and water--a "classic public good: it is too costly and unwieldy for individuals to provide for themselves, and it is impossible to exclude individuals from enjoying it once it is provided."²²⁴ National security law seeks to protect and preserve national interests, protect the lives of its military members, and be prepared for future conflicts. The precautionary principle is a bedrock component of environmental law that seeks to protect the environment. National security law and military planning more generally take a similar approach. Culturally, military planners and decision-makers are uncomfortable making decisions without complete intelligence and facts.

In the face of the politicization of climate science and official climate denial by several high-ranking political leaders, the DoD and the national security intelligence community continue to report on and acknowledge the myriad national security threats posed by climate change. These intelligence reports increasingly engage with climate science reports.

There is a certain durability to conceptualizing climate change as a national security issue that may transcend political discourse. For example, DoD guidance on planning for climate change remains in effect. The 2014 Climate Adaptation Roadmap stated that climate change "will affect the Department of Defense's ability to defend the Nation and poses immediate threats to U.S. national security."²²⁵ The former Pacific Commander, Admiral Locklear, publicly stated that climate change is the greatest long-term threat in the Pacific region.²²⁶ Former Secretary of Defense, James Mattis, has publicly spoken about the threats posed by climate change and in his confirmation

²²⁰ Simon Denyer, *Kerry Calls Climate Change a Weapon of Mass Destruction, Derides Skeptics*, Wash. Post (Feb. 16, 2014), <https://perma.cc/DH8T-VA72>; McMahon, *supra* note 219. Leaders of SIDS have also utilized a more securitized language in their discourse about the threats posed by climate change on their future.

²²¹ H.R. Res. 109, 116th Cong. (2019). Using this militarized climate language is not without controversy. Representative Ocasio-Cortez has declared the threat of climate change our generation's World War II. Aronoff, *supra* note 176. In addition, Sen. Elizabeth Warren (D-MA) has proposed legislation addressing climate change's security impacts.

²²² Barack Obama, President, State of the Union Address (Feb. 12, 2013).

²²³ Richard Lazarus, *supra* note 219. The Paris Agreement on Climate Change adopted the threat language in its preamble, recognizing the need for an effective and progressive response of climate change based on the basis of the best available scientific knowledge.

²²⁴ Light, *Valuing National Security*, *supra* note 7, at 1797 (quoting Barry S. Rundquist & Thomas M. Carsey, Congress and Defense Spending: The Distributive Politics of Military Procurement 7 (2002)).

²²⁵ See Dep't of Def., 2014 Climate Change Adaptation Roadmap 1 (2014).

²²⁶ See, e.g., Bryan Bender, *Chief of U.S. Pacific Forces Calls Climate Biggest Worry*, Bos. Globe (Mar. 9, 2013), <https://perma.cc/B3NG-GC7U> (quoting Admiral Sam Locklear, who called climate change the biggest long-term security threat in the Pacific theater).

hearing to [362] serve as the Secretary of Defense openly addressed climate change as a national security threat.²²⁷

The military has a deep planning culture that takes a risk-based approach.²²⁸ Mission planning includes "identification and assessment of the effects of climate change on the DoD mission" and "anticipating and managing any risks that develop as a result of climate change to build resilience."²²⁹ It must continuously weigh uncertainty and wrestle with risk. Planning for changes in the operational environment is a defining aspect of the military planning process. The military now defines climate change within existing doctrine as: "Variations in average weather conditions that persist over multiple decades or longer that encompass increases and decreases in temperature, shifts in precipitation, and changing risk of severe weather events."²³⁰

Within the military, understanding the operational environment is crucial to military strategy and success. The term "operational environment" is defined as "a composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander."²³¹ Today, military planners must consider and take into account future changes to the operational environment. As environmental law and climate change law have a heavy emphasis on changes in the *physical* environment, national security planners have historically had a heavy focus and emphasis on planning for changes to the *operational* environment. Climate change is already dramatically transforming the operational environment. The Arctic is warming two to three times faster than the rest of the world.²³² Certain "black swan" tipping-point events--such as marine sheet instability in Antarctica or massive loss of the Greenland ice sheet--could result in a multi-meter rise in sea levels over hundreds or thousands of years.²³³ Recent scientific reports indicate that the Antarctic ice sheet is melting as much as six times faster than the rest of the world, and oceans are warming at a much faster rate than previously estimated.²³⁴ [363] These instabilities could be triggered this century as the temperatures rise around 1.5-2.0 degrees Celsius.²³⁵

Even the UNSC has begun to address climate change as a threat to international peace and security, holding several high-level meetings to better understand the threat posed by climate change.²³⁶ While the UNSC has stopped short of making a legal determination that climate change is a "threat to international peace and security"--

²²⁷ Andrew Revkin, *Trump's Defense Secretary Cites Climate Change as National Security Challenge*, ProPublica (Mar. 14, 2017), <https://perma.cc/7KQY-3TBT>.

²²⁸ See Light, *Valuing National Security*, *supra*note 7, at 1778 (hypothesizing that "linking a reduction in reliance on fossil fuels to the value of promoting national security ... has the potential to change individual attitudes and beliefs ... about energy use and climate change").

²²⁹ Dep't of Def., Man. 4715.21, Climate Change Adaptation and Resistance 3 (2013).

²³⁰ DoD Dictionary, *supra*note 67, at 34.

²³¹ *Id.* at 175.

²³² See IPCC 1.5 Report, *supra*note 4, at SPM-4. For an overview of the stress that climate change is placing on the physical environment in the Arctic, see Robert V. Percival & Mark P. Nevitt, *Polar Opposites: Assessing the State of Environmental Law in the World's Polar Regions*, 59 B.C. L. Rev. 1655 (2018).

²³³ See generally Nassim Taleb, *The Black Swan* (2010).

²³⁴ See, e.g., Chris Mooney, *Antarctic Ice Loss Has Tripled in a Decade. If That Continues, We Are in Serious Trouble*, Wash. Post (June 13, 2018).

²³⁵ IPCC 1.5 Report, *supra*note 5, at SPM-7.

²³⁶ See Leila Mead, *U.N. Security Council Addresses Climate Change as a Security Risk*, Int'l Inst. for Sustainable Dev. (July 13, 2018), <https://perma.cc/5DYA-TVKF>.

thereby actuating certain powers--it has discussed climate change's destabilizing effects in two resolutions. Two recent UNSC resolutions specifically highlighted the "adverse effects of climate change and ecological change" in destabilizing the security situation in both Lake Chad Basin and Somalia. ²³⁷

In sum, conceptualizing climate change via the lens of national security can potentially spur action, or at least maintain existing measures on climate change. In recent years, the executive branch and Congress have largely undone many of the climate change efforts from the previous Administration. Yet Congress has begun to take steps within the yearly defense budget to address climate change impacts on national security infrastructure. ²³⁸The Republican-controlled Congress recently required that the DoD issue a report on the "vulnerabilities to military installations ... resulting from climate change over the next 20 years." ²³⁹Further, while the current President has not taken proactive steps to address climate change, at the DoD, many of the Obama-era guidance on climate change is still in effect, including the DoD climate adaptation roadmap and guidance on construction in flood zones.

IV. Climate-Security Risks

There is increasingly an alignment in values between climate change policy and national security policy. Human-caused climate change is accelerating environmental degradation, causing drought and famine, and quickly leading to humanitarian crises. ²⁴⁰Unlike existing national security waivers built into environmental [*364] law, the "securitization" of climate change seeks to limit GHG emissions and provide for greater environmental protections. Yet the climate security conceptualization is not without risk. In what follows, I highlight the numerous ways that this climate change-national security connection presents both opportunities and risks.

While both areas of the law are relatively new, their genesis and evolution could not be more different. National security law came into fruition in the aftermath of World War II with the passage of the 1947 National Security Act. National security law is much more a top-down, hierarchical, institution-based area of law--think of the DoD, the CIA, and the ODNI. In contrast, environmental law emerged in the 1960s from the bottom up in response to ecological devastation described by environmental pioneers such as Rachel Carson.

There may be mutual distrust between these two communities that must be mended. Climate change has stressed and will continue to stress this federal, more top-down model. Extreme weather fueled by climate change will place an increasing burden on disaster response at the state and local levels. States have historically played a leading role in environmental matters while cities and localities have recently taken a leadership role in sustainability and climate mitigation efforts in the face of White House and EPA indifference (or outright hostility). ²⁴¹

Disparate origin stories between national security and environmental law can likely be overcome, particularly as we scratch the surface of the shared values between these two bodies of law. In many ways, the ongoing dialogue between the environmental and national security communities is a long overdue acknowledgement of the shared

²³⁷ S.C. Res. 2408 (March 27, 2018); S.C. Res. 2349, P 26 (March 31, 2017).

²³⁸ See, e.g., American Clean Energy and Security Act of 2009 (Waxman-Markey Bill), H.R. 2454, 111th Cong. (2009).

²³⁹ National Defense Authorization Act of 2018, Pub. L. No. 115-91, § 335(c)(1), 131 Stat. 1283, 1357 (2017) (Langevin Amendment).

²⁴⁰ Consider the case of Syria, a nation that suffered a drought immediately before a costly Civil War, displacing 1.5 million people within Syria. A domestic crisis quickly became a regional crisis that soon became a global crisis. Gregg Badichek, *The Threat Divider: Expanding the Role of the Military in Climate Change Adaptation*, 41 Colum. J. Envtl. L. 139, 144-45 (2016). For example, climate change severely exacerbated a five-year drought in Syria that "contributed to massive agriculture failures and population displacements." Dep't of Defense, Response to Congressional Inquiry on National Security Implications of Climate-Related Risks and a Changing Climate 4 (2015); see Climate Security 2007, *supra* note 6, at 13-18.

²⁴¹ In the United States, cities, states, localities, and industries are making international commitments to meet and surpass the commitments made in the Paris Agreement. Hiroko Tabuchi & Henry Fountain, *Bucking Trump, These Cities, States, and Companies Commit to Paris Accord*, N.Y. Times (June 12, 2017), <https://perma.cc/2E2M-Z9AD>.

values between the two areas that have always been present, albeit below the surface. National security and protecting the environment both ultimately share the same goals of ensuring our well-being and preserving our rich national heritage.²⁴² This has important consequences for separation of powers as the President has been granted much greater deference in national security matters.

Further, the executive branch has expanded the scope and breadth of national security matters, particularly in the aftermath of the Cold War.²⁴³ In recent [*365] years, the President has sought to expand conceptions of national security in international trade and a border "crisis" between the United States and Mexico. In doing so, the executive branch has sought to increase its authority and widen the definition of what is considered a national emergency. Congress, in turn, has yet to define national security and courts have struggled to place limitations on the term.²⁴⁴

National security is a powerful and increasingly capacious term that the executive branch often relies upon when it desires a certain policy preference. There is a risk in diluting this term to the point where it loses all of its meaning. In recent years, we have seen national security rationales used in the areas of immigration, trade, and elsewhere at the expense of personal liberty. Is the convergence of environmental, climate change, and national security law part of a broader continuation of national security casting a wide shadow over a variety of issues? And is there a concern that national security is so encompassing that it is beginning to lose all its meaning?

Conclusion

Not only is climate change a "super-wicked" environmental problem--it also accelerates existing national security threats, acting as both a threat accelerant and catalyst for conflict. Climate change will force us to think anew about how different areas of law engage with each other. While environmental law and the emerging field of climate change law have historically been in conflict with national security law, that is changing. Climate science makes clear that we must massively reduce GHG emissions from all sources this century or face devastating security consequences. National security and intelligence reports reinforce what science is telling us. We will need to invest in a massive, scalable energy transformation to secure a more livable future. And sea-level rise, storm surge, and extreme weather--all exacerbated by climate change--threaten our sovereignty and national security in new and dramatic ways.

In the absence of a binding legal framework to comprehensively address climate change's enormous impacts, policymakers may increasingly turn to the full menu of legal authorities that are available, such as the NEA. But this, too, [*366] will be extremely controversial and risky for democratic governance. Nevertheless, there is a growing space between the actions that are needed and the actions that are actually undertaken on climate. As climate change increasingly engages with the national security community, we must be aware of the risks and opportunities in addressing matters of climate security.

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²⁴² *Id.*

²⁴³ See generally Rosa Brooks, *How Everything Became War and the Military Became Everything* (2017); Harold Koh, *The National Security Constitution* (1990). In addition, Professor Maryam Jamshidi has offered a similar critique, arguing that the climate crisis should be conceptualized not as a national security issue but a human security issue. Maryam Jamshidi, *The Climate Crisis Is a Human Security, Not a National Security, Issue*, 93 S. Cal. L. Rev. Postscript 36 (2019).

²⁴⁴ See Laura K. Donohue, *The Limits of National Security*, 48 Am. Crim. L. Rev. 1573, 1577-80 (2011) (describing the difficulties in defining "national security"); Rana, *supra* note 97, at 1423. Under existing military joint doctrine, "national security" is defined as: "A collective term encompassing both national defense and foreign relations of the United States with the purpose of gaining: (a) a military or defense advantage over any foreign nation or group of nations; (b) a favorable foreign relations position; (c) a defense posture capable of successfully resisting hostile or destructive action from within or without, overt or covert." DoD Dictionary, *supra* note 67, at 162.

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